Knowledge Management through Storytelling and Narrative – Semiotics of Strategy

Graeme Carswell MacLeod Smith MA. DipM. PGCLTHE. MCIM. FIDM. AFHEA

School of Business, Law and Communications

Solent University

Southampton

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Abstract

This study reviews knowledge management as a construct for analysing strategy discourse; identifying key strategy artefacts; and how they may be interpreted by key stakeholders engaged in strategy discourse. The context of this study is set initially in three case studies that illuminate the nature of storytelling and narrative as a strategy discourse. In seeking to clarify the nature of storytelling and narrative and the import of social architecture, further enquiry was required. The importance of storytelling and narrative in the development of strategy is recognised. In developing the notion of strategy as a people orientated construct, this study provides a theoretical foundation for the determination of how actors in strategy may take a position on strategy.

To understand the nature of strategy discourse, this study reviews the field of semiotics, as a form of social constructivism, and its importance in revealing the way artefacts in strategy discourse may be interpreted as it regulates behaviour towards establishing a position in relation to strategy. Some readers of strategy have flirted with the notion of semiotic theory in the field of strategy discourse, but the flirtation is fleeting and does not attempt to read strategy from a semiotic locus. In this study, the focus is on the way strategy conversation changes as the nature of the story is changed. This locus revealed a knowledge gap in current literature and therefore the relevance of this study.

The mixed methodology in this study draws upon existing semiotic theory to explicate strategy as a story of intent; with a focus on the semiotic components; the artefacts; and the vocabulary of strategy discourse that so determine how actors in strategy take a position on strategy. This study uses three case studies as the genesis for this investigation, rooted in the academic field of knowledge management to set the context of this study on Semiotics of Strategy. These studies are practice based and define an organisational model of the social interactions affecting knowledge transfer within organisations arising from problems of knowledge location, knowledge retention; and knowledge transfer.

The research framework chosen to achieve the research aims of this study, includes using Q Methodology, and the complexity of the Q Sort data demanded a logical and consistent analysis of the data to triangulate a semiotic view of strategy discourse. This ontological approach captures the epistemological characteristics of strategy artefacts interpreted by the Senior Management Team, as actors, at Solent University. This research project underpins the value of a semiotic view as a diagnostic tool to determine the position that actors take in the context of existing strategy discourse. From an etymological perspective this study posits a typology based upon a semiotic framework to help diagnose how actors take a position based on their interpretation of key strategy artefacts; and to understand the nature of interpretation as a means of intervention by which the strategy narrative may be reshaped.

What is of interest is how storytelling and narrative empowers individuals as they seek to disseminate and transfer knowledge from the past in order to shape the future. This study reveals the inflection that individuals may exert on knowledge artefacts; and the motivation of those who trade in knowledge assets, through storytelling and narrative, as players in the game of strategy search for coping strategies in an attempt to adapt to the new reality. Ultimately this study provides new insight into the power of semiotics in the early stage; and constructivism in the later stages of the knowledge management continuum; and describes how participants in strategy adopt a position on strategy.

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1 CHAPTER ONE – Introduction and Overview

1.1 Introduction

> "It is... possible to conceive of a science *which studies the role of signs as part of social life*. It would form part of social psychology, and hence of general psychology. We shall call it *semiology* (from the Greek *semeîon*, "sign"). It would investigate the nature of signs and the laws governing them. Since it does not yet exist, one cannot say for certain that it will exist. But it has a right to exist, a place ready for it in advance. Linguistics is only one branch of this general science. The laws which semiology will discover will be laws applicable in linguistics, and linguistics will thus be assigned to a clearly defined place in the field of human knowledge." Saussure 1983, p, 15-16 cited in (Chandler 2007).

This Chapter sets out the context of this study and its aims, objectives and research questions in relation to this research project. It will seek to define the knowledge gap in current literature and the significance of this study. The research approach and planned journey have been mapped out and the thesis structure is described. The context is set initially in the research field of knowledge management as a means of modelling the storytelling and narrative of strategy development using three case studies. These case studies begin to illuminate the nature of storytelling and narrative as a strategy discourse and the discussion in this Chapter begins to develop the notion of strategy as a people orientated narrative and reviews critical discourse analysis in the context of what is strategy.

1.2 Background

At the heart of successful business strategies is the ability of senior and middle managers to interpret meaning and transfer that meaning through storytelling and narrative (Jorgensen and Boje 2006). This interpretation suggests that interaction between actors within the business seems to change the meaning of strategies through the interpretive lens of Semiotics.

Jorgensen and Boje (2006), argue that knowledge and learning are important in the creation of intellectual capital; they go on to define intellectual capital as the basis for creating intellectual and social value; a key component in our attempt to invoke strategy. Mouritsen (2004), develops this line of enquiry by asserting that intellectual capital gains its legitimacy from its capacity to intervene in the worldview of others. An example of an intellectual capital construct in business

may include the introduction of a balanced scorecard. Jorgensen states that these human constructs are not innocent concepts, tools or methods; they are instruments used by actors in changing social reality and therefore cannot be separated from relations of power.

Following Wittgenstein (1983), intellectual capital is first understood as a "language game"; and following Foucault (1979), it is understood as "power". As a language game, intellectual capital now exists under certain historical and social circumstances, which shape it, for example through storytelling, narrative and strategy discourse, for good or ill. Intellectual capital is a social construction, shaping reality (Astley 1985) and intellectual capital, language and actions cannot be adequately understood independently in the context of place and time (Boje 2001),. When intellectual capital is used to analyse and solve problems, this is accomplished from a specific viewpoint. Intellectual capital needs to be understood contextually in situ in the context of conversation and discourse to determine how it works affects the way people interpret that conversation. For those who practice intellectual capital, critical theory is crucial in understanding the affect those who practice intellectual practice has on those who are exposed to it. Intellectual capital is a specific "power" at work, which again may be regarded as positive or negative depending on the position from which one speaks. Viewing intellectual capital as a language game demands that the so-called objective, neutral or value-free viewpoint (still dominant in managerialism) exits our strategy discourse right here and right now. Rather, there are actors who speak and act from certain intentions and positions.

1.3 Context

There is a symbiotic relationship between knowledge management and strategy discourse in seeking to control strategic outcomes through storytelling and narrative (Sloan 2017). Sloan also asserts that strategy implementation, at whatever level it occurs within the organisation, is dependent upon knowledge management and the transfer of knowledge through strategy discourse. There is a considerable weight of argument (Sloan 2017; Jelenc 2009; Loncar 2017; Skokan, Pawliczek and Piszczur 2013) that views strategic thinking as an intent-driven approach to

strategy formulation that includes inquiry, reflection and discourse as knowledge is transferred through a dialogue that continually tests and challenges the underlying premise of the strategy.

Sloan (2017) in her triadic model can be seen as an attempt to show that strategizing occurs at all levels within the organisation in terms of strategic thinking; strategic planning and strategic implementation.

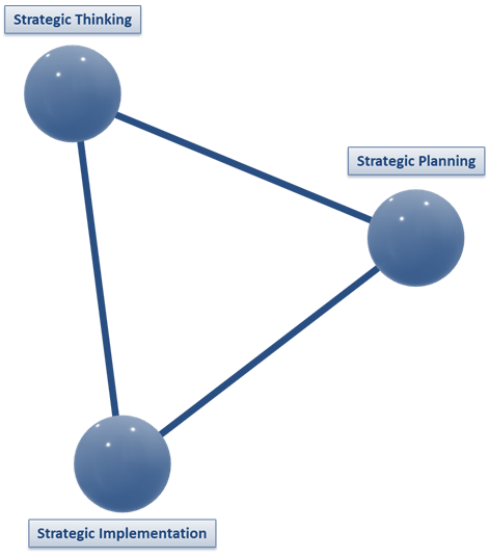


Figure 1: Strategic Thinking Model™ (Sloan 2017 p, 35).

Sloan defines this triadic view as one where strategic thinking as a means of critical evaluation of organisational capabilities to deal with changing environmental conditions that may challenge current assumptions; strategic planning is an analytical approach that is reductionist in nature to eliminate tensions and ambiguity in the pursuit of consensus; and finally, strategic implementation that defines a rational, logical linear approach to implementing strategic intent at an operational level. Sloan further argues that this model should not be seen as a linear end-to-end process, but rather as an iterative process that is both progressive and regressive according the nature of strategy discourse extant across the strategy community and the needs of the organisation at a particular moment in time. This argument is also supported by Loncar (2017) who similarly suggest a triadic construct of strategy formulation provided as; strategy planning; and strategy development; and strategy implantation. What the two models seem to have in common is a strategy development construct that is both iterative in nature in terms of being both progressive and regressive as the strategy discourse seeks consensus in the strategy

narrative across the strategic thinking landscape. We need to understand how to learn to think strategically. As strategic thinking researcher Lara Jelenc notes:

> "The strategy focus must change from the models to the subject of strategy people." Jelenc cited in (Sloan 2017)

It is against this backdrop that this narrative seeks to review the nature of knowledge management with strategy.

1.3.1 Knowledge Management

Strategy can be framed as a knowledge management issue if it can be regarded that knowledge transfer is a construct of strategy discourse (Zheng, Yang and McLean 2010). Knowledge management plays a mediating role in connecting current context and strategy with the capacity of the organisation. The context specific nature of knowledge management determines who participates in the strategy discourse and consequently how they engage in the knowledge transfer process (von Krogh, Ichijō and Nonaka 2000). Exploration of this potential role as a mediating factor may provide a greater comprehension of strategy discourse dynamics as a means of intervention.

Knowledge management theory combines a number of theories (Baskerville and Dulipovici 2006) from existing research into a caucus of innovative concepts of its own. Knowledge may be framed as beliefs, norms and values that provides a framework for evaluating and contextualising new experiences. Originating in the minds of others, in organisations, it may become documented in routines, processes, practices, norms and folklore through storytelling and narrative (Davenport and Prusak 2000).

Swan *et al.* (1999) determine two schools of thought of knowledge management as systems that use technical means to process and disseminate information. And as a community-based activity that emphasises the transfer of knowledge through discourse, storytelling and narrative, as collaborative venture to explore and exploit current knowledge artefacts in pursuit of strategic intent (Gonzalez and Martins 2014). As a community-based activity this may assume that teamwork is an important organisational aspect with a common language and identity and an

overt sense of purpose. In a covert sense, knowledge artefacts may have different interpretations (Brown, A. D. and Thompson 2013) that are hidden from the intent of a cohesive knowledge management framework and this may impact on the nature of knowledge transfer within the community-based activity engaged in strategy discourse. (Lakoff and Johnson 1980)

1.3.2 What is Strategy

The notion of strategy is a human construct that seeks to force the will of one onto that of another (Sloan 2017). The means by which this may be done has been recorded by early Chinese military philosophers such Sun Tzu, who wrote The Art of War in 400 B.C. and entered the lexicon of western thinking through the school of Greek philosophy in the pursuit of achieving goals and objectives under conditions of doubt and uncertainty. Sloan goes onto state that the Greeks regarded strategic wisdom as a mercurial quality of shifting perspectives relative to changing conditions and therefore emphasised the relationship between these two perspectives rather than on objectives and rational qualities, well aware of the changing and organic nature of strategic thinking as experience forced reinterpretation as conditions morphed into a changing landscape. This subjective relativism had a significant influence on the ancient Greeks' concept of strategy.

Given this subjective, interpretative, and unfolding nature of knowing, wisdom was also perceived differently by the ancient Greeks (Cummings and Wilson 2003). The ancient Greeks assumed an irresolvable tension between, and mutuality of, chaos and cosmos (order). Consequently, the Greeks did not see strategy wisdom as the ability to represent the order of things with objective certainty in the interests of predictability and control but, rather, they saw it as metos. Metos referred to the ability to oscillate between the cosmos (a world of forms and laws) and chaos (a world that included the multiple, unstable, and unlimited nature of affairs). The Greek concept predicates the need to experience closely the changing strategy environment to implement or adapt strategy plans as dictated by stable or changing circumstances that may demand reinterpretations. This pre-modern view of strategy was focused on the interplay of seeming paradoxes and contradictions, playing off and balancing one another; and therefore, Metos

demands nimble oscillation between cosmos and chaos, structure and circumstance, design and emergence (Cummings & Wilson, 2003); in other words, the adoption of a new position.

According to the rational school of thought (Mintzberg, Ahlstrand and Lampel 1998), the knowledge base of a profession is understood to have four essential properties, it is specialised, scientific, firmly bounded, and standardised. It is the standardisation rationale that is important as it explains a preoccupation with developing strategy. The drive for competitive advantage and the need to justify the use of scarce resources that drives the strategy planning process. It is this preoccupation with process based on models and strategy protocol that drives much current strategy planning. Today, the debate continues between strategy as a process of learning through hypothesis, generation, and revision, in accordance with the view of the design school, and strategy as a process of learning through exploration and discovery, from the perspective of the emergent school. Sloan (2017) argues that actors in strategy need to critically re-examine data and perceive information in novel ways, to dramatically shift perspectives, and to re-create and adapt continually and focus on how people learn to think strategically.

Mintzberg proposes that the role of strategy planners is not to discover the correct choice but, rather, to support strategy formulation by supplying the data and analyses for strategic thinking in order to inform and expand the issues considered during strategic discussions. Strategic thinking is about far more than problem solving; strategic thinking suspends strategic problem solving to engage in a critical discourse and examination of the underlying assumptions that support the premise of strategy, rather than focus only on the problem-solving outcome.

To Mintzberg, the essence of strategy making is the process of learning as we act. As he reminds us:

> "Strategies can develop inadvertently, without the conscious intention of senior management, often through a process of learning … Learning inevitably plays a, if not the, crucial role in the development of novel strategies." Mintzberg 1994 p,111

According to Sloan (2017) the traditional approach to developing strategic thinking is most often anchored in a planning model rather than in learning and creation. The planning model of

strategic thinking offers very little emphasis on creative thinking, long-term thinking, critical reflection, critical dialogue, challenge, or testing. Strategic thinking may be regarded as a continuous learning process rather than as a sequence of steps resulting in a strategy, therefore this point of sense making reminds us that knowledge is not always the outcome of learning. Rather, the learning outcome is the experience itself and the meaning that individuals give to the experience and the consequential transfer of that knowledge through storytelling and narrative.

The characteristics that most observers may identify as organisational strategy (Johnson, G., Scholes and Whittington 2008), may be defined as long term direction; seeking competitive advantage; an assessment of an organisation's resources and competencies; to achieve the values and expectations of key stakeholders related to the organisation. However, Johnson et al recognise that strategies do exist at a number of levels within the organisation such as corporate, strategic business unit and at an operational level. (Johnson, Scholes and Whittington 2008) also relate that the term strategic management underscores the importance of managers in the strategy process. These managers are engaged in an ongoing discourse as they contest complexity; their participation in the decision-making process; the viability of their own domains; and the securing of scarce resources to enact the requirements of the strategy. As strategy implies change this may be considered as a knowledge management process through debate, discussion, storytelling and narrative at all levels throughout the organisation. This strategy work involves talk in all its forms (Balogun *et al.* 2014) such as conversations at the water cooler, statements, corporate accounts, and carefully crafted text and narrative. This storytelling and narrative are key to making sense and of communicating strategy discourse. Word in an oral or material sense are vital in signifying artefacts in strategy. Such discourse of artefacts are therefore embodied within the body of concepts that embody the strategy construct. In this context strategy can be seen as discourse so widely adopted and accepted that it can have far wider effects beyond the organisation and the actors in strategy within it.

It is this concept of strategy as discourse that is of increasing interest (Ezzamel and Willmott 2008). Academic researchers have drawn on a variety of discursive approaches to study strategy

in this context adopting a post-structuralist approach (Knights and Morgan 1991), critical discourse analysis Balogun *et al.* (2014), narrative perspectives Barry & Elmes (1997a); Fenton & Langley, (2011), rhetoric (Samra-Fredericks (2005) to better understand the linguistic aspects of strategy discourse. These theoretical and methodological devices may prove valuable in furthering an understanding on how discourse shapes and works the direction of strategy. Balogun et al, (2011) argue that there is a need to analyse discourse to define how actors engaged in strategy discourse may use storytelling and narrative to move the discourse in a particular direction to their interpretive advantage and counter the interpretation of others who similarly seek to build credibility for their own argument, maybe leading to the creation of a more shared and negotiated discourse of the future (Balogun, Jarzabkowski and Vaara 2011).

1.3.3 Discourse Analysis

In relation to 1.3.2 above,

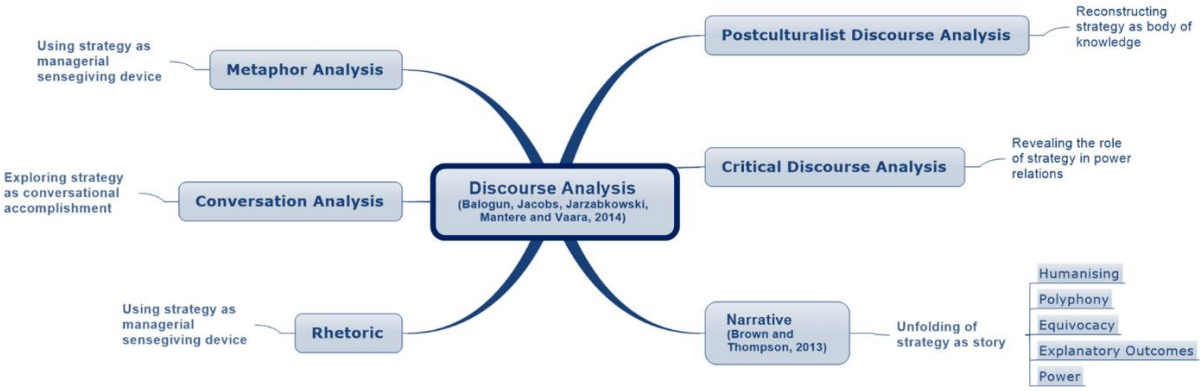


Figure 2 on page 9 below provides a framework that places discourse analysis in context. Fairclough's (2003) definition of discourse as resources employed in the production and consumption of strategy is consequential for constructing, making sense of and communicating strategy. The construct of discourse analysis enumerated by Balogun, Jarzabkowski and Vaara (2011) relates to the psychology of strategy discourse as actors struggle to make sense of disparate and often contradictory artefacts in strategy and Mantere and Vaara (2008) go further in suggesting discourse as a social interaction where actors seek to exert power to define the relationships between actors in strategy. The construct of discourse analysis is discussed below.

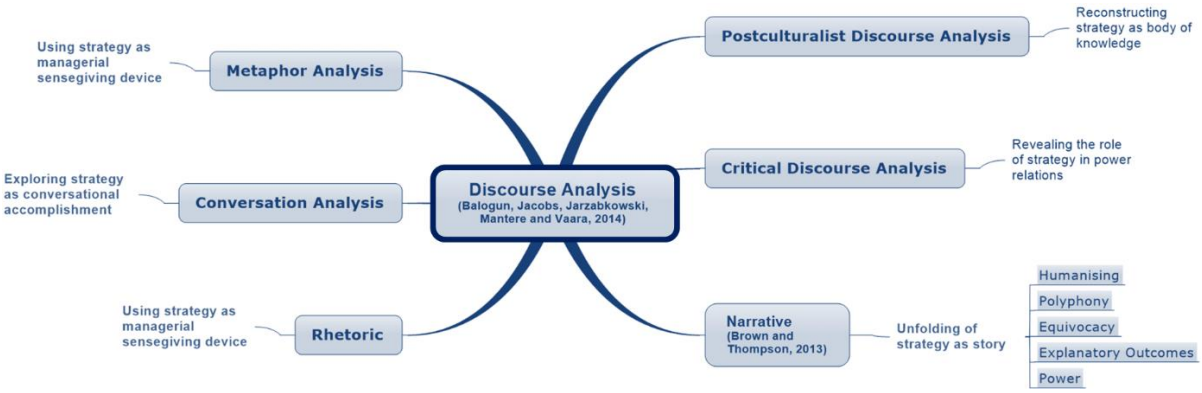


Figure 2: Discourse Analysis (Balogun *et al.* 2014; Brown and Thompson 2013).

For the purposes of this discussion there is a need to acknowledge discourse as a sign system (Beynon-Davies 2010), and that this is a key concept in the field of semiotics used to refer to any system of signs and relations between signs. Semiotic analysis evaluates signs and symbols as a significant part of communications between actors engaged in discourse. Discourse is a synonym for a sign system and therefore connotes the use of human spoken language, however this should only be seen as one example of a sign-system, albeit a complex one.

The discursive passage of this research therefore explores the nature of knowledge management, strategy and discourse analysis in the context of three case studies, reviewed in Chapters One and Two, elaborate in the context of semiotics in Chapters Three and Four.

1.3.3.1 Poststructuralist Discourse Analysis

This construct revolves around social codes and knowledge, specific concepts, theories and models as discursive constructions that enable and constrain strategy discourse. Drawing on the work of Knights and Morgan (1991), Balogun *et al.* (2014) researched an ethological perspective to strategy discourse to show how it developed as a body of knowledge. On the basis of knowledge and power their emphasise on discourse focussed on the subjective nature of strategy discourse to reveal agency and identity of actors who may be considered as strategy actors to reveal symbols of professionalisation and competence in organisations, with important implications for subjectivity and organisational power relations.

1.3.3.2 Critical Discourse Analysis (CDA)

While CDA is rooted in the study of applied linguistics and explores the power implications that may exist in social intercourse through strategy discourse (Laine and Vaara 2007), it also focusses on storytelling and narrative practices more generally (Balogun *et al.* 2014). While Laine and Vaara (2007) also discuss CDA in terms of subjectivity in the context of organisational change and the impact that strategy actors may have on strategy discourse and the exercise of control, others may mobilise alternative discourse to resist strategic intent or to protect their own autonomy.

1.3.3.3 Narrative

A narrative perspective encourages a focus on storytelling in organisations (Boje 2001). It shifts the emphasis of discourse from a text base to one where strategy is analysed as a form of narrative. Barry and Elmes (1997) analysis provide a very useful contribution, pointing to the potential for linkages between the narrative perspective and strategy. Since then studies have shown the potential of narrative perspectives as a key construct of strategy and more widely in organisational change (Fenton and Langley 2011; Brown and Thompson 2013).

Barry and Elmes (1997) go on to view the narrative perspective as one where actors strive to reconcile alternative meanings in the pursuit of protecting their own domains and authority; and indeed, relevance in a new strategy situation. This further suggests that actors in strategy appropriate different versions of the strategy discourse that may easily reconcile with their current worldview, aims and ambitions; and at the same time abate the interpretations of others whilst seeking to defend their own.

Hierarchical status may bring certain advantages (Boje 1995), such as control over encoding the strategy narrative pursuant to the direction and interpretation of the strategy discourse. This 'control' of the encode/decode process is fraught with difficulty as strategy actors bring to bear their own realities to in order to influence strategy discourse. (Brown and Thompson 2013) consider the narrative construct constituted as humanising; polyphony; equivocacy; explanatory outcomes and power. However, empirical work in the area of narrative, strategy and strategic change remains limited (Fenton and Langley 2011).

1.3.3.3.1 Humanising

As a rhetorical construct strategy discourse may be seen as a humanising act of annunciation (Balogun *et al.* 2014), as actors seek legitimacy and goal congruence. Strategy narratives are worked on reflexively by individuals and groups who are engaged simultaneously in authoring accounts of who they are, with issues of impression management, and that storytelling is motivated to construct themselves as skilful and wise.

1.3.3.3.2 Polyphony

Organisations may be regarded as polyphonic in nature (Hazen 1993; Rhodes 2001), while the organisation may have a dominant strategy this may obscure the counter rhetoric and nuanced versions of the strategy narrative within the strategy discourse. A narrative approach is valuable in this charivari of narrative noise, because it makes more visible the polyphony of strategizing, the multiplicity of constituencies and stakeholders involved in authoring, editing and amending the strategy (Boje 1995; Brown, A. D. and Humphreys 2006), consequently strategies are subjected to intermediation and discrimination in strategy discourse (Taylor, J. R. 1999).

1.3.3.3.3 Equivocality

Complexity in strategy discourse often goes hand-in-hand with equivocacy (Neill and Rose 2007) as vagueness and dubiety stalk the development of the strategy discourse scenarios in which confusion, disagreement and lack of understanding abound. A focus on knowledge transfer through storytelling and narrative may help to understand equivocacy in a strategy context as Mink (1978) in (Brown and Thompson 2013). Narratives in strategy discourse develop in a progressive and regressive way as actors seek to influence and persuade stakeholders in the strategy community with argument, sometimes coercion and aegis (Sonenshein 2010).

1.3.3.3.4 Explanatory Outcomes

A narratological perspective can provide assistance to discourse analysis as the narrative form facilitates researchers' efforts to deal adequately with the polyphony and complex social processes. It draws attention to the storied nature of the explanations for outcomes provided by strategy practitioners(Brown and Thompson 2013). Stories impose order and sequence on sets of

equivocal happenings, allowing sense to be made, consistency to be read into organisational action, and catharsis to be achieved. In telling stories of strategies these stories contribute towards defining causal relationships between events, and constitute winners and losers, successes and failures, attributing responsibilities, point to the role of random factors and luck, allocate blame for problems and praise for supposedly prescient thinking.

1.3.3.3.5 Power

A narrative perspective may be useful in determining the narrative turn on strategy discourse from the perspective of power exerted by participants in strategy formulation (Brown and Thompson 2013). This focus may highlight the plurality of narratives that may be marginalised and those that become dominant. Brown and Thomson go onto assert that this type of enquiry may show how storytelling and narrative in strategy discourse mediates counterargument that applauds some and impugns other's interpretation of narrative in the pursuit of power.

It has long been recognised that a characteristic of strategy is ambiguity (McCabe 2010), and that the adoption of a strategy agenda is in part a human endeavour to manage ambiguity. The existence of ambiguity concerns a plurality of actors in strategy who seek consensus. This has the potential to amplify conflict and resistance because individuals must interpret a given situation and may do so in different ways. Moreover, frustration may abound from a lack of clarity, as strategy actors feel manipulated and distrustful. Ultimately, ambiguity may both thwart and assist the exercise of power whether it is used in intended or unintended ways. Resisting behaviours are highlighted as ethical choices from organisational participants (Bardon, Brown and Pezé 2017). In this way, Bardon, Brown and Pezé (2017) show that strategy actors may resist a strategy discourse that they may interpret as prescribing them to privilege strategy outcomes. The ambiguities, contradictions and uncertainties involved in strategy discourse (Bardon and Josserand 2018) illuminate the possibility of interrogating and challenging claims to power of those prescribing or proscribing strategy efficiencies.

1.3.3.3.6 Summary

A narrative approach to discourse analysis predisposes a degree of shared storytelling (Balogun, Jarzabkowski and Vaara 2011), which is doubtless a prerequisite for organised activity, but organisations consists of stakeholder groupings that are often fractious as they contest scarce resources within the organisation and struggle with ambiguity in the strategy context. The antonym to this is rather than have a single strategy, most organisations have multiple strategy stories (Balogun *et al.* 2014). One strategy document may spawn many nuanced strategy narratives even among those senior executives who contributed most to its authorship. That is, organisations are best conceived as multiple, dynamic patterns and trajectories of strategy stories, each dependent on who is looking and from what vantage point. One key aspect of the utility of a narrative approach is that it liberates strategy scholars from their traditional fixation with the grand stories authored by senior executives.

This is in part because it can assist in the production of more plausible and verisimilitudinous representations of what strategists do (Rhodes and Brown 2005). Finally, it is worth noting that a narratological approach may open up new vistas not just for strategy-as-practice researchers, but in many other fields of inquiry in organisation and management studies. The effort expended through strategy is a measure of the limits to managerial power (McCabe 2010) and research is needed into how resistance has been able to influence and change corporate strategies for the betterment of those on the receiving end of them.

1.3.3.4 Rhetoric

Strategy discourse reflects complimentary, competing and conflicting meanings towards the interpreted objectives of the organisation, often in a plurivocal context where diverging interests abound (Barry and Elmes 1997), rather than establish truth claims (Balogun *et al.* 2014), rhetorical analysis may be used to study the nature of rhetorical devices being used to construct goal alignment between diverse interests engaged in the development of organisational strategy. Rather, rhetorical analysis can be employed to bring about change or to justify particular decisions through an act of persuasion or even coercion. Rhetoric analysis is particularly well suited to the

examination of strategic action (Sillince, Jarzabkowski and Shaw 2012), because it is a strategic form of speech act, in which actors use speech to have effects upon an actual or implied audience.

1.3.3.5 Conversation Analysis

Ethnomethodology and conversation analysis are concerned with understanding the everyday interactions through which people make sense of their world and uphold social order (Balogun *et al.* 2014) Conversation analysis can be used to analyse strategy discourse that have ambiguous and contradictory meanings to actors in strategy; and may reveal how interpretations of strategy artefacts are promoted and others downplayed, and specific voices heard or marginalised through the mundane speech acts (Thomas, R., Sargent and Hardy 2010).

1.3.3.6 Metaphor Analysis

In terms of metaphors strategy is replete with metaphors and analogies as an inductive form of reasoning (Hill and Levenhagen 1995). Lakoff and Johnson (1980) reason that metaphors and analogies are tropes that consist of words in other than their literal sense that are familiar with a wider discourse recognised as constructive to social engagement in a new reality.

And Cornelissen, Holt and Zundel (2011) further suggest that by so framing strategy in this way helps to enable the acceptance of strategy and wider organisational change.

1.3.4 Conclusion

Sense-making literature according to Balogun *et al.* (2014) sheds light on the relationships between the linguistic and cognitive, from a strategy perspective. Vaara, Sorsa and Pälli (2010) suggest three levels of sense-making:

I. A micro level on everyday social interactions through which strategy is constructed.
II. A metalevel on strategy as a body of knowledge.
III. An organisational level on particular discourse formations such as strategy narratives.

Strategy is conducted with artefacts of various kinds that form the basis of strategy discourse that has power and influence beyond the singularity of their situation. As an area of largely unexplored phenomena the role of discourse in sense-making provides an opportunity to explore

links with material practices of agency and strategizing (Ezzamel and Willmott 2008; McCabe 2010). It is generally agreed that:

> "A focus on stories and storytelling as strategic practices encourages attention to be paid to which narratives are marginalised and which rendered dominant, and the role of narrators, settings, political tactics and performance in determining whose voices are heard" (Brown and Thompson 2013 p, 19).

There is a need to understand how strategy is shaped by strategy actor endeavour (Balogun, Jarzabkowski and Vaara 2011), how they are enabled, how they are constrained by others and how they are seen by others; and at the same time how less powerful actors build credibility to counter the authority of their senior managers leading to the creation of a more shared and negotiated narrative of the future (Balogun, Jarzabkowski and Vaara 2011). Balogun et al go on to assert that movements in the meanings in strategy language require further investigation on how language, metaphor, analogy and other rhetoric devices influence and shape strategy discourse within organisations.

In this respect Bardon and Josserand (2018), retrospective life narrative approaches (Watson 2008) appear particularly well adapted to such political and historical investigations at the individual level. This could make a valuable contribution to further understanding strategy stakeholder adoption and implementation decisions. The use of three knowledge management case studies reviewd in Chapter Two helps to articulate the nature of strategy discourse and narrative turn in three very different cases.

1.4 Research problem

This research project will seek to construct a new methodological approach, supported by field research, to understand knowledge transfer in the strategy narrative processes. This will involve the construction and validation of the durability of the existing strategy; and then look at each stage through the lens of existing semiotic theory. The research project starts from a theoretical basis from the genesis of a case study approach that originally sought to understand project failure/success as a knowledge management issue. One of the issues with literature reviewed to date appears to suggest that, while there has been a great deal of work in these disparate fields,

there has been very little attempt to draw on these fields of research to attempt to understand the role of semiotics on knowledge transfer. This research project will seek to identify the nature of strategy failure/success from a semiotic interpretation of the strategy narrative.

1.5 Aims and Objectives of the Study; and Research Questions

1.5.1 Aims

This research project will study the nature of strategy narrative across the knowledge transfer continuum and seek to model how stories manage and facilitate or hinder knowledge transfer in strategy through a semiotic approach.

A 1. To understand the nature of storytelling and narrative in strategy discourse.
A 2. Establish the link between knowledge transfer through storytelling and narrative in strategy discourse.
A 3. Seek to define the extent to which actors in strategy take a position as a result of their engagement with the strategy story and narrative via a semiotic approach.

The purpose of A1 is to set the scene and provide a backdrop to this research project. This will develop a discussion on the knowledge management process, as a means of developing a strategy narrative, as seen from various existing source material perspectives. In order to fulfil A2, A1 will help to synthesise the nature of storytelling and narrative in strategy, in the context of a knowledge management framework defined in A1. The third aim underpins the value of a semiotic view as a diagnostic tool to determine the position that actors take in the context of existing strategy narrative. This provides a typology based upon a semiotic framework that establishes the positions that actors may take on their interpretation of key strategy artefacts and their interpretation of them through the existing strategy narrative. This story is fundamental to understanding the nature of current interpretation of the strategy as a whole and to identify the means of intervention by which the strategy narrative may be shaped.

1.5.2 Objectives

O 1. Locate and define stages in the knowledge continuum; and the process that enriches and transforms artefacts in strategy from symbols; to data; and into information that may facilitate the transfer of knowledge.

O 2. Locate and define, through original fieldwork research, the essential idiosyncrasies of stories, through a semiotic approach. To understand how storytelling through actors and narrative as artefacts contribute to the transfer of knowledge in successful knowledge transfer projects.

O 3. Establish a typology through a semiotic approach that facilitates the mapping of actors taking a position in a strategy narrative.

1.5.3 Research Questions

To realise the above aims and objectives, the following fundamental questions have been considered for this research:

RQ 1. Is a knowledge management perspective enough to diagnose the true nature of knowledge transfer through strategy discourse?

RQ 2. What are the strategy artefacts that may so define strategy discourse?

RQ 3. To what extent does strategy conversation, narrative, and discourse contribute to the position that participants in strategy may take?

RQ 4. Can a semiotic perspective help to diagnose the position that actors, as key stakeholders in strategy, take on existing strategy?

RQ 5. Can the semiotic diagnosis of strategy discourse be a useful means of intervention in the nature and direction of the strategy narrative?

1.6 Knowledge Gap

A great deal of the literature in the field of knowledge management and strategy formulation suggests a rational and normative view of the development of strategy narrative (Narayanan and Fahey 1982). Indeed, Narayanan and Fahey go on to assert that organisations may be seen as collectives where individuals strive for a share of scarce resources in order to achieve their own ambitions. In doing so this gives rise to coalitions and politics being used as tools to operationalise their own personal agendas within the strategy narrative. Critical evaluation of the decision-making process so far would appear to do little to illuminate the reasons why actors in strategy make the choices that they do. Indeed, Jabri, Adrian and Boje (2008) are also of the opinion that an applicable piece of research has yet to be developed to understand the nature and extent of these coalitions and political alliances that form within a strategy narrative. The individual decision-making process within the strategy narrative may appear rational if it is consistent with beliefs, norms and values-based system of the wider strategy narrative. And that the politicised nature of intercourse between actors participating in the strategy narrative may

adapt and/or adopt satisfying approaches that may gain influence and access to scarce resources and that this can lead to organisational objectives may then be displaced by personal objectives (Tarter and Hoy 1998). Husted (2000) discusses evolving strategy narrative types of social issues such as disagreements, gaps in expectations between individuals and the firm and its stakeholders. However, he does acknowledge that gaps between reality and expectations give rise to conflict but does not describe the dynamics that may give rise to this juxtaposition.

1.7 Gaps in Research and Practice

Substantial research and existing literature resources seem to have a preoccupation and focus on the outcomes of strategy in terms of failure or success. The problem with this focus is that the genesis of success or failure of strategy is spatially quite far removed from the outcome of strategy. The gestation and development of strategy is an intensely people orientated process; and to that end, the success or failure of the strategy is fundamentally reliant on how key stakeholders (actors) interpret a wide array of data and information (artefacts) as part of a dynamic strategy narrative that seeks consensus in forming objectives usually in a shifting dynamic strategy environment. This research project explores the knowledge gap to illuminate the interpretation of strategy artefacts as a means of input to the strategy narrative that may determine the durability of strategy in the longer term.

As far back as 1986 Grinyer, Al-Bazzaz and Yasai-Ardekani (1986) discussed the strategy planning process and describes how the juxtaposition may introduce bias to the strategy narrative, but without describing what the motivating factors of the individuals were. Meznar and Johnson (2005) critically reviewed the boundary interface between the strategy artefacts inherent in a strategy narrative and its participant actors in this discourse. While Carrol cited in (Meznar and Johnson 2005) elucidates that the wider management group also participate in gaming the strategy narrative and are not always consistent in their approach to stakeholder issues and may be proactive on one issue and at the same time defensive on another, however, again they do not go on to discuss the roles played and why there may be inconsistency. McCarthy (2006) uses trust

as a metaphor for why people exchange knowledge artefacts without going further to define the motives that may engender trust.

Gagne, Marylene (2009) acknowledges that the study of knowledge in organisations has included studies on the nature of knowledge and on the process of knowledge sharing but she also asks for a more complete diagnosis of strategy narrative intervention, to encourage knowledge sharing, requires more research based on self-determination theory as well as the critical evaluation and review of existing models of knowledge-sharing behaviour. There are several sources that touch upon the discussion relating to the influence that actors may exert rationally or in self-interest without elaborating in any detail as to how and why they may exert such influence (Emenalo 2011). She further discusses what she describes as the human-centric theory without detailing the politics that may motivate the trading of strategy artefacts.

1.8 Significance of the Study

In recent years there has been an attempt to codify organisational culture within the field of strategy as practice (Johnson, Scholes and Whittington 2008); and there is a burgeoning caucus of literature on the science of semiotics as a means of intervention in advertising (Chandler 2015) and wider social research (Chandler 2007); but as yet there has been no serious attempt to use semiotic theory to diagnose the durability of the strategy narrative. The significance of this research lies in the semiotic taxonomy of strategy artefacts in strategy narrative and how this typology may fashion the intervention of existing strategy narrative to achieve a more desirable outcome for strategy.

1.9 Research Approach and Planned Journey

As an overall research strategy this research project seeks to answer the original research question (Saunders, Lewis and Thornhill 2015). Research design may be defined more as an art form than a science that defines stages and processes that scope and design the tools required in the pursuit of the stated aims and objectives of the study (Jill Collis and Roger Hussey 2017). The detail of the definition of the process may be so defined by the nature and the extent of the

research project through a road map description of the research journey (Vogt, Haeffele and Gardner 2017). The three key milestones of this research project consist of clearly stated aims and objectives that answer the research question as part of a definition and design phase that scopes the project; a data collection phase; and finally, analysis, findings and conclusions phase as set out below.

1.9.1 Definition and Design

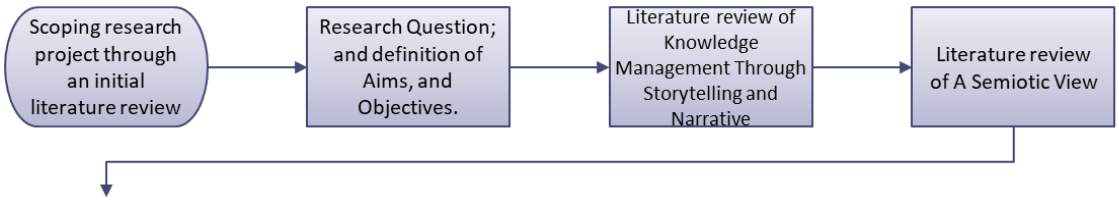


Figure 3: Research Phase 1

This phase is a necessary exercise to help scope the nature and extent of this research project. Research resources in this phase discuss at length communications issues in relation to three case studies that were extant at the time, originally framed as a knowledge management issue. It is widely acknowledged that knowledge management issues in large projects are borne on the back of the interpretation storytelling and narrative that seeks to complete such projects. As storytelling and narrative is a people centric activity, then it follows that this research needs to understand the nature of storytelling and narrative. This activity by participants engaged in a strategy narrative comes from a wide variety of positions as they individually seek an understanding of the artefacts that are inherent in strategy narrative, therefore this research discusses semiotics as a method for gaining a deeper understanding of strategy narrative.

1.9.2 Data collection

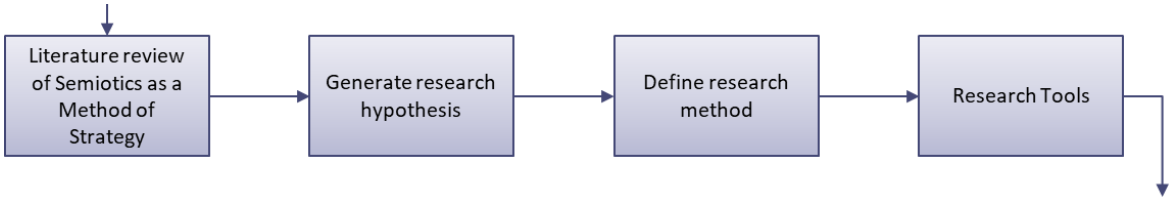


Figure 4: Research Phase 2

The data gathering phase sets the framework for developing suitable research tools that identify the nature of the story currently extant within the strategy stakeholder group. The Part 1 tool

uses Q-Sort as a method for collecting qualitative data relating to strategy artefacts used to understand the current strategy narrative; while Part 2 determines by quantitative methods the position that stakeholders have taken mapped onto a strategy landscape.

1.9.3 Analysis, Findings and Conclusions

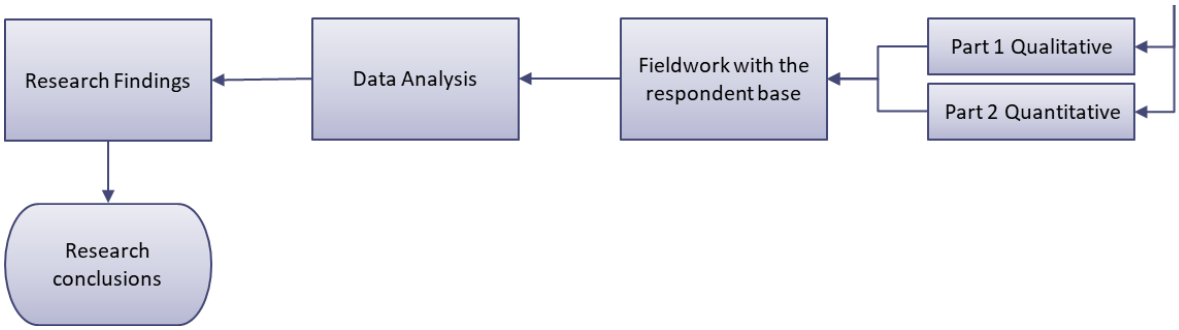


Figure 5: Research Phase 3

Finally phase three includes data analysis using factor analysis techniques derived from data gathered by the Part 1 research tool; this analysis is then used to discuss and expand on key findings gained from the analysis; leading to a discussion regarding the conclusions that may be drawn from the research project.

1.10Thesis Structure

This thesis is divided into eight chapters, each chapter standing in its own right. The thesis opens with initial chapters defining the background to this research project and presents an overview of the research aims and objectives. The thesis then builds on this background to discuss existing literature sources to develop a research design that builds data collection tools that gather data and information to help answer the aims, objectives and research questions in Chapter One. The final chapters analyse the data collected and discuss the meaning of that data in the context of the ambitions of this thesis expressed in the finding and conclusions in the concluding chapters. Table 1: An outline of chapters in this thesis, page 22 below sets out the detail of the structure of this thesis.

Chapter	Chapter description
Chapter 1: Introduction and Overview	Chapter One sets out the aims, objectives and research questions in relation to this research project. It defines the knowledge gap in current literature and the significance of this study. The research approach and planned journey have been mapped out and the thesis structure is described.
Chapter 2: knowledge Management through Storytelling and Narrative	This chapter describes the genesis of this whole research project. It discusses the challenges of knowledge management from a storytelling and narrative perspective and concludes that project issues are largely communications issues in relation to storytelling and narrative. The basis of this discussion reviews three case studies that were peer reviewed, published and presented to a number of international conferences on knowledge management Full context of the case studies are at Annex 1: Case Studies page 229 below.
Chapter 3: A Semiotic View	The narrative now builds on the notion that knowledge management as a communication issue, discussed in Chapter One, demands further enquiry into the interpretation of communication in the strategy narrative. The discussion takes a semiotic view as a basis for the diagnosis of communication through a strategy narrative. The very basis of communication is formed by the interpretation of signs and symbols, their use; and interpretation that helps to form an opinion. Semiotics is the study of signs and sign-using behaviour. It focuses on meaning derived rather than the choice of signs used through the work of Saussure, Peirce and Greimas.
Chapter 4 Semiotics as a Method for Strategy	Chapter 4 builds on the semiotic view in the previous chapter by discussing semiotics as a method for strategy. Strategy is the direction and scope of an organisation over the long term, which achieves advantage in a changing environment through its configuration of resources and competencies with the aim of fulfilling stakeholder expectations. Given this notion it may be argued that strategy in the main may be defined in terms of reasoning as abduction, in which the major premise is evident but the minor premise and therefore the conclusion only probable. Peirce was the first to suggest that this phase has a logic. This logic can help researchers understand how actors in a strategy narrative take a position under doubtful circumstances. Basically, forming a conclusion from the information that is known. This discussion forms the basis of research design in the following chapter.
Chapter 5: Methodology	The purpose of this chapter is to present the philosophical assumptions underpinning this research, as well as introduce the research strategy and the empirical techniques applied. The chapter defines the scope and limitations of the research design and situates the research amongst existing research traditions in information systems. This chapter offers a detailed explanation and justification of the chosen research strategy. Following a detailed discussion of data-collection tools (Part1 and Part 2), a justification is given with special focus on the methods adopted from which information was obtained. This section concludes with an explanation of the methods of data analysis adopted to ensure the validity and reliability of the findings and ultimately to provide empirical evidence that answers questions raised in Chapter One.
Chapter 6: Data Analysis	This chapter deals with qualitative and quantitative data analysis gathered by the research tools defined in the previous chapter. There is a discussion on the data analysis process used and the stages by which the analysis triangulates the locus of this research to clearly justify the meaning derived from this exercise.
Chapter 7: Findings	This chapter discusses the results from the data triangulation that took place in Chapter 6. Initial findings indicated the existence of identifiable clusters that were influential in the initial data analysis. Once identified, the clusters were themselves analysed using the same techniques in the initial analyses. The results of the final data analysis are discussed in the context of the Peircean Triadic framework to help define the nature of interpretation against this triadic model.
Chapter 8 Conclusions	The final chapter of this thesis concludes the entire discussion, summing up the issue and identifying the limitations of this research. This chapter concludes the thesis by reiterating the initial hypothesis and examining the data in the context of initial source literature and the subsequent factor analysis derived from the Q-Sort data analysed by factor analysis techniques. The discussion concludes with a critique of the methods used and review of possible future research; and the possible future utility of the research technique used as a method for diagnosing semiotics in strategy as a means of more successfully intervening in the strategy narrative.

Table 1: An outline of chapters in this thesis.

1.11 Chapter Summary

This chapter sets out the aims, objectives and research questions in relation to this research project. It defines the knowledge gap in current literature and the significance of this study. The research approach and planned journey have been mapped out and the thesis structure is

described. The context is set in the research field of knowledge management as a means of modelling the storytelling and narrative of strategy development using storytelling and narrative as a basis for strategy discourse and begins to develop the notion of strategy as a people orientated narrative and reviewing critical discourse analysis in the context of what is strategy. The following chapter describes the genesis of this whole research project. It discusses the challenges of knowledge management from a storytelling and narrative perspective and concludes that project issues are largely communications issues in relation to storytelling and narrative. The basis of this discussion is three case studies that were peer reviewed, published and presented to a number of international conferences on knowledge management.

2 CHAPTER TWO – Knowledge Management through Storytelling and Narrative

2.1 Introduction

This section will elaborate the aims and objectives of this research through existing research in order to establish a better understanding of strategy narrative; by those who seek to influence others; and those who seek to establish a position through the interpretation of strategy. To do this it will be necessary to review the construct of knowledge management through storytelling and narrative; the means by which actors interpret strategy using semiotic theory; and discuss the nature of discourse in strategy conversation with the aid of case studies. This review diagnoses three case study projects between 2000 and 2006 at Ordnance Survey, during a period of significant change in market conditions that challenged significantly the achievement of corporate objectives. These studies, in Annex 1: Case Studies on page 229, illustrate the nature and the extent of the strategy narrative extant within these three projects at Ordnance Survey.

2.2 Case Study Summary Knowledge Management through Storytelling and Narrative

2.2.1 Introduction

In the context of this study, these case studies are designed to frame the context of this research thesis as necessary to outline the genesis of this study (Studies on page 229 below) by reviewing the construct of knowledge management through storytelling and narrative as a means of knowledge transfer. This initial research diagnosed existing research base as one relating to knowledge transfer through social architecture in an organisational context. Consequently, this early research began to develop the notion of knowledge transfer through storytelling and narrative as a basis for organisational learning set in strategy narrative.

Ordnance Survey is Great Britain's National Mapping Agency. It is widely regarded as the world leader in its field, which covers the production, maintenance and marketing of a wide range of maps, computer data and other geographical information for business, leisure, educational and administrative use. Two centuries after its foundation, the original military title remains, but

Ordnance Survey has been a wholly civilian organisation since 1983. It is a free-standing UK Government Department and Executive Agency and, on 1 April 1999 became a Trading Fund, a status allowing it more commercial freedom than would otherwise be possible for a public-sector organisation. Ordnance Survey's core responsibility today is to survey maintain and keep up to date the national topographic database. Of necessity, the rapid marketisation of Ordnance Survey's previous public sector standing demanded considerable change in staff roles, responsibilities and customer service processes as it sought to re-orientate service provision to a rapidly expanding customer base demanding access to the new topographic data archive and an increasing range of data products derived from it.

2.2.2 Review of Case Studies

In the first case study I concluded that knowledge management problems were linked to ignoring social networks within the organisation, in the pursuit of IT solutions, that led to key stakeholder groups impacted by the project feeling excluded. Rather than being a process problem this led to poor new knowledge emergence; therefore, this was a communication issue brought about by failure to engage with stakeholders and stakeholder groups and alliances within the scope of the project.

The second case study built upon the previous case study and shows that this project gave greater attention to the positions that people take in the expectation of significant change to their workplace environment. The discovery that project failure may be due to considerable spatial distance from artefacts that were the root cause of that failure was a significant finding. Allowing staff to build these artefacts led to a new conversation and narrative and a greater understanding of the issues in the customer interface that led to a learning process that allowed staff to better understand the necessary change that needed to be made. This led to a sense of 'ownership' of the change process that morphed old ways of working into new ones. It was the process of identifying artefacts that challenged the concept of process improvement; and giving 'ownership' of the conversation to those engaged in the process, that was of profound interest to the organisation. Therefore, attention to the conversation, storytelling and narrative helped to avoid

much of the pain in the first case study. This facilitated a much better relationship between the strategy managers and the key stakeholders in the scope of the project and highlighted the need to better understand the nature of storytelling and narrative in strategy.

In the third case study experience gained in projects one and two helped to frame the context of introducing the concept of a balanced scorecard for the senior management team at Ordnance Survey. Many people think of measurement as a tool to control behaviour and to evaluate past performance. The introduction of a balanced scorecard at Ordnance Survey facilitated the strategy review that was essential in strategic learning. The balanced scorecard, with its specifications of casual relationships between performance drivers and objectives allows corporate and business unit executives to use their periodic review sessions to evaluate the validity of the unit's strategy and the quality of its execution (Kaplan and Norton 2007).

The context of this project was very firmly framed as a knowledge management problem. It's origination within the organisation was a means of dealing with ambiguity and doubt regarding the currency and interpretation of performance of the strategy. This doubting had a wide canvas at Ordnance Survey where some stakeholders were interpreting strategy artefacts to subvert key strands of strategy while others exploited ambiguity inherent in current strategy discourse to produce interpretations that allowed them to pursue personal objectives and seek to avoid challenging targets. In extremis those engaged in strategy discourse sought to consolidate their positions to protect the integrity of their own domains; and indeed established partnership alliances with other individuals whose motivations for resistance did not necessarily proceed from threatened interests or identities.

Hitherto the introduction of a balanced scorecard at Ordnance Survey the then existing conversation in the sales and marketing team was viewed from an almost totally external perspective. The key drivers for this were set in the performance targets that were focussed on sales, revenue and the development of a partner channel to open new markets. The barriers to achieving these targets were considerable and the team conversation was consumed by discussion on closing the gap between budget targets and actual performance, from an external

perspective, without any diagnosis of the of the reasons why this gap existed from an internal staff and process perspective.

This project set out to change the conversation with a completely new narrative. There was a newfound recognition within the team that the root cause of the performance gap lay within the organisation and on the basis of the two previous case studies again a consensus was sought on the introduction of a balanced scorecard and an agreed set of artefacts as a form of good governance. Learning from case studies one and two the strategy planners engaged the senior management team in identifying and agreeing artefacts as key performance indicators. This process helped the senior management team to invest a sense of ownership in the new balanced scorecard and consequently led to a new conversation that created a more holistic view of performance. Originally framed as a knowledge management project this led to a new conversation through storytelling and narrative and led to greater accountability. It also helped to create a more cohesive team that grew in confidence as the strategy discourse more wholly focussed on the artefacts within the balanced scorecard, as a vehicle for a more fluid form of knowledge transfer.

Many people have different views about the nature of knowledge as individuals seem to define their own terminologies to suit a particular approach to a problem. For example, Rehauser and Kramer (1996) in (Probst, Raub and Kai Romhardt 1999) identified four levels, drawing the distinction between symbols, data, information, and knowledge. And McElroy (2002) argues that knowledge management life cycles are seen as continuums of the knowledge process. His knowledge life cycle suggests that as knowledge is created it is then subjected to the process of validation. Knowledge that survives the validation process can subsequently be operationalised and this may lead to new knowledge displacing the old. This is a people dynamic and therefore the validation process that McElroy alludes to is one of interpretation and interpretation is normally done through the semiotic process and explicated through discourse. Storytelling and narrative as discourse empowers individuals as they seek to disseminate and transfer knowledge from the past in order to shape the future through inflection, they may exert on knowledge

artefacts; modulated by the motives of those who trade in knowledge assets, as stakeholders seek to cope with uncertainty in an attempt to adapt to the new reality.

2.3 Knowledge Continuum

This section develops the notion on the construct of knowledge describing the development of the knowledge continuum. It may be helpful to view this construct as a continuum that is an iterative and cumulative cycle that allows researchers to map out the basic phases, the transitions between the phases, and the different type of communities that are required for each of those phases (Williams, 2008) . Williams further argues that the first transcription of experience into data, at the start of the continuum, is the most basic function within semiotics. This alludes to the importance of social constructivism, to storytelling and narrative, and its possible contribution to the transfer of knowledge in the latter stages of the knowledge continuum as can be seen in Table 2: Knowledge continuum on page 29 below.

If researchers accept that the transfer of knowledge may only occur through the use of language, then it may be instructive to gain some understanding of the process of knowledge creation and transfer referenced from contemporary sources. The purpose of Table 2: Knowledge continuum below is to show an array of knowledge continuums from a number of referenced sources over the past ten years. In order to give focus to research into knowledge management through storytelling this may help to define, for the reader, that part of the continuum that will form the parameters to this research.

Variously, the authors listed in Figure 5 below, attempt to describe this phenomenon as a process with varying degrees of completeness. In many ways it may not be helpful to describe knowledge management as a straight linear process as the complexity in the way actors internalise new knowledge and assimilate it with past experience is both progressive and regressive in nature (Earl 2001). As many frameworks are either too abstract or too limiting in suggesting organisational intervention to exploit their knowledge assets.

That said, for the purpose of this research, it may be useful to outline key stages that have common consensus to at least give some definition to that part of the continuum that is of greatest interest to this research. Table 2: Knowledge continuum below shows the development of the knowledge continuum over the past ten years. All quoted authors seem to suggest that there is a definable process that has a broad consensus in terms of definition. I have tried to map these definitions across six stages in the development of knowledge simply in order to show the key stages defined by each author.

	Semiotics in Strategy Process					
Reference: Stage:	**1.Symbols**	**2.Syntax**	**3.Information**	**4.Networking**	**5.Transfer**	**6.Attribution**
Sinkula (Smith 2009)			Information acquisition		Information dissemination	Use
Rehauser & Kramer, 1996 (Probst, Raub and Kai Romhardt 1999)	Symbols	Data Syntax	Context Information		Networking	Knowledge
(Demerest 1997)		Construction		Embodiment	Dissemination	Use
(McElroy 2002)			Productions	Validation	Integration	
(Andrews and Delahaye 2000)			Importing knowledge		Sharing knowledge	
(Gupta and Govindarajan 2000)		Value	Source motivation	Channel	Target motivation	Capacity
(Earl 2001)			Technocratic		Commercial	Behavioural
(Smith and Blackman 2001)		Message	Encode	Channel	Decode	Understanding
(Blackman and Henderson 2005)			Identification	Validation	Schools of dissemination	
(Lavergne and Earl 2006)		Data	Information	Tacit knowledge	Explicit knowledge	Empowerment
(Williams 2008)	Experience	Data	Information (informal)	Information (formal)	Knowledge	CoP
(Smith 2009)	Source	System	Context Information		Knowledge	Attribution
	Past			**future**		

Table 2: Knowledge continuum

Stage one may be defined as the basic building block of symbols and signs that are then subject to the rules of syntax that combines them into data at **stage two**. **Stage three** attempts to correlate data to try and give it some meaning in the context for which it is to be used. **Stage four** is where information and the channel of communication are validated to ensure fit for purpose. **Stage five** is where information becomes internalised and assimilated to create new meaning. **Stage six** is

the synthesis and attribution of new data from old that defines its intrinsic value to the user. This continuum may be seen as an iterative and cumulative cycle that allows researchers to map out the basic phases, the transitions between the phases, and the different type of community narratives that are required for each of those phases (Williams 2008).

In many ways it may not be helpful to describe knowledge management as a straight linear process (Earl 2001) as the complexity in the way knowledge is internalised and assimilated with past experience is both progressive and regressive in nature and many frameworks are either too abstract or too limiting in suggesting organisational intervention to exploit their knowledge assets. That said, for the purpose of discussion, it may be useful to outline key stages that have common consensus to give some definition to that part of the continuum that is of greatest interest to this research. Although precise stages in the knowledge continuum are disputed, there is consensus that some form of continuum does exist (Probst, Raub and Kai Romhardt 1999) and (Smith and Blackman 2001), starting from initial interpretation of signs and symbols; though internalisation of information; leading to the attribution of knowledge.

This continuum may be seen as an iterative and cumulative cycle that allows researchers to map out the basic phases, the transitions between the phases, and the different type of community narratives that are required for each of those phases (Williams 2008). Williams further argues that the first transcription of experience into data, at the start of the continuum, is the most basic function within semiotics. Previous discussion in this paper could suggest that at each transitive stage new symbols may be created and meaning instructed by semiotics.

2.3.1 Locus of knowledge management through storytelling and narrative

As previously discussed, Rehauser and Kramer (1996) in (Probst, Raub and Kai Romhardt 1999) identified four levels, drawing the distinction between symbols, data, information, and knowledge. The stages which transform from one level to the other are described as the enrichment process. When rules of syntax are applied to symbols, they become data. When data is capable of interpretation within a particular context and then internalised by the receiver it becomes information. Networked information used in a particular field of activity then becomes

knowledge. And McElroy (2002) argues that knowledge management life cycles are seen as continuums of the knowledge process. His knowledge life cycle suggests that as knowledge is created it is then subjected to the process of validation. Knowledge that survives the validation process can subsequently be operationalised and that this may lead to new knowledge displacing the old. What is of interest here is how storytelling and narrative empowers individuals, at stage 5 in Table 2: Knowledge continuum above, as actors seek to disseminate and transfer knowledge from the past in order to shape the future.

A major contribution to this understanding emerged in the 1980's in the field of a novel research discipline Organisational Semiotics, for which Ronald Stamper's contribution is significant and essential (Gazendam and Liu 2005) . Ronald Stamper introduced a system of concepts that play an important role in organisational semiotics. His semiotic ladder emerged from difficulties detected while trying to define 'information'. Stamper's (Gazendam and Liu 2005) opinion is that, in defining something, it is important to specify precisely by what procedure or operations it is to be measured or performed. This then leads to an operational definition. In addition, he continues, you have to use ostensive definitions to clarify meaning. An ostensive definition is a definition by pointing to an example of the thing or quality being defined. In this Stamper asked for an ostensive definition of basic concepts like perception and conception. The aim of Stamper's semiotic ladder is to help define signification in an organisational context to describe a semiotic picture of the human, organisational and social contexts that may frame knowledge transfer. At a semantic level all communications models show filtering and 'background noise' as key elements in the success (or not) of knowledge transfer (Smith and Blackman 2001).

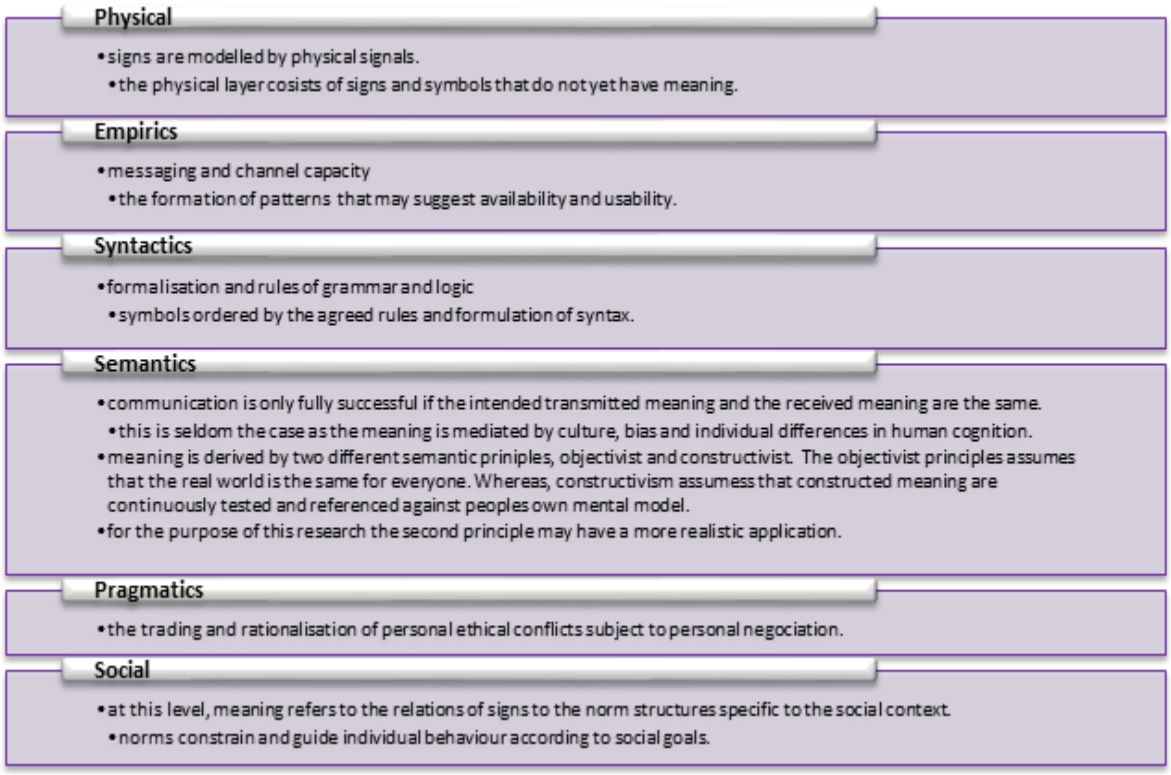


Table 3: Stamper's Semiotic Ladder (Stamper 1973).

This research will use Stamper's model as a structure to compare and contrast knowledge transfer at different stages on the knowledge continuum. The aim of Stamper's semiotic ladder is to help define signification in an organisational context to describe a semiotic picture of the human, organisational and social contexts that may frame knowledge transfer.

At a semantic level all communications models show filtering and 'background noise' as key elements in the success (or not) of knowledge transfer (Blackman and Smith 2004). This is because social constructs frame the mental models used by the individuals to understand their world. Mental models are cited as providing the link between collectives and individuals as they proffer a context for the interpretation and understanding of new information (Kim 1993), (Conner, Kinicki and Keats 1994), (Swaab *et al.* 2002) and (Hill and Levenhagen 1995). The validity of the outcomes from the early part of this process will be subject to trust. Validity may depend upon agreed selection of symbols, application of the rules of syntax and the methods of transmission. However, common understanding and not the same understanding, forms a culture; just as behavioural patterns are similarly understood and not identically understood (Schiffel 2009). What matters about this is that, in effect, the filtering that occurs closes down

the nation to some ideas, as the mental models prevent open acceptance of them (Lee-Kelley and Blackman 2003) and (Blackman and Henderson 2003). For each of these levels it should be possible to identify the artefacts, actors and agents involved in the selection of signs, the application of syntax and transmission. What is of interest here is an evaluation of the effectiveness of knowledge transfer, through a semiotic approach, on the basis of storytelling and to model this in an organisational context.

2.3.2 Storytelling in Strategy

A number of theories have been reviewed to narrow the focus of possible research subjects. Namely:

I. Narrative and storytelling; and language game and power
II. Resource based theory
III. Contingency theory
IV. Organisational adaption

The bullets above highlight a number of areas for discussion, which have mostly been suggested by the authors, or identified by this author as potential knowledge gaps, in the content of the papers so far read, for subjects as original research. David Snowden talks about narrative as a complex adaptive system (Snowden 2006) where people are agents and stories are artefacts. Snowden also critically analyse the purpose and strategy linked to the agents and not the artefacts. Snowden then argues that stories have a 'life' of their own, especially where they form myths that form the nature of human interactions and therefore co-evolve with the human condition. He does talk about the tyranny of experts; who deconstruct and interpret narrative to impose ideology; but without further elaboration. There is no discussion on the inflection that agents may exert on artefacts. Jorgensen and Boje (2006) describes intellectual capital (IC) as a human construction and instrument used by actors to change reality. Actors use IC to control, exploit and manipulate their justification for rationalising organisational practice in the struggle for corporate power. Jorgensen relies on Wittgenstein who describes IC as a language game; and Foucault who describes it as power. Language games are important to IC as IC is created through talk and actions between actors characterised by continuous creation, modification, destruction

and reconstruction of concepts. Power recognises IC as a language game that cannot be understood without reference to time, place and mind. What isn't defined is how power is exercised. How is power exercised in the construction of intellectual capital.

Literature on strategy formulation traditionally has emphasised the rational and normative aspects of strategic development within organisations (Narayanan and Fahey 1982). Narayanan and Fahey go on to cite organisations as political entities and coalitions motivated by scarce resources, unclear technologies and differential linkages to their internal and external environments. They go on to make a critical analysis of the decision-making process, which in itself is insufficient to explain how strategic choices are made. They then argue the need to investigate the organisational processes out of which strategies emerge in order to understand why they are made. They acknowledge studies in coalition behaviour by game theorists; social psychologists; political scientists; and study different philosophical approaches progressed relatively independently. The lack of convergence, restrictive assumptions and differing settings; they suggest, limits the application of any findings in an organisational context supported by (Jabri, Adrian and Boje 2008). Therefore, a comprehensive review of strategy applicable to organisational settings has yet to be developed of the political perspective in order to understand strategic management.

There are a number of sources that touch upon the discussion relating to the influence that actors may exert rationally or in self-interest without elaborating in any detail as to how and why they may exert such influence (Emenalo 2011). She further discusses what she describes as the human-centric theory of the firm without detailing the politics that may motivate the trading of knowledge assets (artefacts). Emenalo establishes the need for further research on factors such as power, politics, social ties and informal networks within the organisation but does not highlight the need for research into personal motivations. Czarnitzki and Wastyn (2009) assert that they have not found any evidence that organisations who manage knowledge are better overall performers. Within a reward structure, they assert that while sharing ideas and insights may certainly contribute to innovation, they go on to say that more detailed data may be necessary to

uncover such effects. While Alsaaty and Harris (2009) state that there is little evidence of politics as a critical success factor.

Bonn and Pettigrew (2009) in their paper propose a research agenda that can assist in developing dynamic and comprehensive theory of boards of directors, based upon the concept of temporality, the life cycle metaphor, decision making theory and resource dependency theory. In particular, they assert that researchers need to examine the activities and choices made by board members, without any mention of what board member motives may be. Braganza, Hackney and Tanudjojo (2007) state that there is a paucity of theory for effective management of knowledge transfer within large organisations. Their research methodology to answer questions such as what attributes lead to effective knowledge creation, mobilisation and diffusion is mechanistic and does not define human behaviour and motives that may contribute to knowledge transfer. De-Long and Fahey (2000) discuss the barriers to knowledge transfer. They argue that if employees believe that the sharing of knowledge will raise personal risk, either through the loss of power or association with bad decisions, then they are unlikely to associate themselves with the behaviours needed to exchange knowledge. They further argue that cultures and subcultures influence this rate of exchange and even define what is relevant knowledge, but without elaboration on the motives accepting or avoiding personal risk.

Contingency theory argues that it is the fit between strategy and structure that leads to improved performance, not the structure itself. Furthermore, the structure (internal characteristics of the organisation) must fit the external environment in which the organisation operates if performance is to be enhanced. Luthans and Stewart (1978) talk about a major strength of general contingency theory is its capacity to help the user predict a greater number of potential or likely effects of implementing a particular intervention strategy in a stated situation. They go on to distinguish between the variables that are subject to the direct control of the individual and those that may be indirectly influenced by the behaviour of the system. In my view, the 'behaviour of the system' needs expanding to define the behaviour of the agents within the

system. Further research should therefore look at how behaviour of the system influences the motives of the individual.

Shepard and Hougland (1978) discuss how the worker's interpretation of their work situation influences their work-related attitudes and behaviour and acknowledge that attitudes and behaviours may change over time as a result of some organisational experience/event. And those individual responses to the complex organisation may vary dependent upon the nature of the system structure. They do acknowledge the ability of individual characteristics and orientations to moderate the influence of organisational or job characteristics while individual responses will vary directly with the degree of compatibility between individual characteristics and orientation and the type of behaviour required of the individual. The individuals need to conform to the system before they feel the need to influence the shape of the system. Lucas and Gresham (1985) studied power, conflict and control in marketing channels, going on to define power, power and uncertainty, and coercive versus reward power; without actually defining why people choose to exert power. They did look at management and control of power and conflict but felt that their results were 'variable'.

Grinyer, Al-Bazzaz and Yasai-Ardekani (1986) discussed the corporate planning process across 48 UK companies and describe how the special focus and vested interests may introduce bias to the corporate planning process, without describing what the motivating factors of the individuals were. (Tarter and Hoy 1998) looked at decision making within organisations and determined that an individual's decision is rational if it is consistent with the values, alternatives, and information that were analysed in reaching it. They then go on to discuss the politicised organisation where individuals may use satisfying approaches to develop strategies where ultimately the game is power, that is, gaining as much influence and as many resources as possible. When politics dominate organisational decision making, then personal goals displace organisational ones. But there is no attempt to explain the motives and types of narrative likely to be used to achieve personal outcomes. (Husted 2000) discusses types of social issues such as disagreements, gaps in expectations between individuals and the firm and its stakeholders. He acknowledges that gaps

between reality and expectations give rise to conflict but does not describe the dynamics that may give rise to conflict.

Meznar and Johnson (2005) discuss managing the boundary interface between the organisation and its stakeholders. They go on to discuss that organisations are not always consistent in their response to stakeholder issues, i.e. proactive on one and defensive on the other, but do not go on to discuss the role people play in this engagement and why there may be inconsistency. Ketokivi (2006) concluded in his paper that the free exchange of knowledge assets is determined whether a system is open or closed. But does not elaborate on defining what an open or closed system was. McCarthy (2006) uses trust as a metaphor for why people exchange knowledge artefacts without going further to define the motives that may engender trust. Gagne (2009) acknowledges that the study of knowledge in organisations has included studies on the nature of knowledge and on the process of knowledge sharing. McCarthy (2006) argues that knowledge sharing is a process of mutuality and that therefore researchers need to use motivation theory to understand its usefulness of this process in predicting the way it may motivate participants engaged in the process. To do this she discusses in some detail the theories of planned behaviour and self-determination; and through them, how human resource management practices impact on the quality of motivation. She then suggests that the design of effective compensation systems to encourage knowledge sharing requires more research and that perhaps a continuum measure of motivation to share knowledge, based on self-determination theory could be developed; as well as the development of quantitative methods to test existing models of knowledge-sharing behaviour.

Miles *et al.* (1978), Miles and Snow (1992) and Mile. *et al.* (1997) discuss the need for organisational agility to make adjustments to environmental shifts, either within the constraints of the operating logic of the existing organisational form or by adopting a new form to fit a new strategy. They go on to acknowledge that in terms of internal communications, every interaction is coloured by the hidden threat of hierarchical politics and that power and influence rather than performance is guiding behaviour; but without defining power politics. A second more common

cause of organisational instability occurs when management do not fully shape the strategy structure and processes to fit the chosen strategy. Unless structure and process decisions required for an operational strategy are properly aligned then strategy is a mere statement and not an effective guide to behaviour. Thirdly, there is a tendency for management to maintain the organisation's current strategy and structure, in the face of overwhelming changes in the environment; or conversely, the accumulation of more know-how than their present operating logic allows them to utilise. This mismatch in capacity may either push managers to experiment outside of their current roles and responsibilities; or force them to work parochially in isolation. The gap can create tension within the community with agents whose roles and responsibilities need to reflect the new needs of the organisation. Therefore, as Kroeber citied in (Brown, S. 1980) asserts, coping strategies are created as a shield to a developing political agenda in order to articulate the individual's contribution in the new organisational reality; the nature and degree of change adopted by the individual will depend on their behavioural characteristics at that time; creating new stories as actors cope with uncertainty in an attempt to adapt to the new reality.

2.4 Knowledge Management Framed as Strategy Discourse

In the previous sections in this chapter the discussion has focussed on issues raised in three case study projects through the lens of knowledge management, as a suggested instrument of enquiry that perhaps illuminates issues that may be considered as either beneficial or injurious to the objectives of these projects. Academic study in the field of knowledge management gave rise to the notion of knowledge transfer where Cortada and Woods (2013) considered it to be a people-based activity through conversational activity in the workplace. This transfer mechanism was further defined as 'soft' such as actors collaborating in the expectation that they may learn from each other (Mason and Leek 2008), arguing that as knowledge repositories (social capital) they are able to transfer knowledge and adapt their knowledge to new contexts as they learn from each other (Easterby-Smith, M., Lyles and Tsang 2008). A key characteristic of this phenomenon is repeated and enduring exchange relationships between the actors (Podolney and Pope, 1998), as Inkpen, and Tsang (2005) further elaborate:

> "In his review, Portes (1998} identifies Pierre Beurdieu's (1988) analysis as the first systematic analysis of social capital. Bourdieu defined the concept as "the aggregate of the actual or potential resources which we linked to possession of a durable network of mutual acquaintance or recognition. At an organisational level, benefits include privileged access to knowledge and information, preferential opportunities for new business, reputation, influence, and enhanced understanding of network norms." (Inkpen and Tsang 2005 p, 150)

The term knowledge management refers to various approaches for improving how organisations capture, distribute and employ knowledge. Amongst these various approaches, storytelling is used as a more or less formalised method and is perhaps the most effective (Swap *et al.* 2001). And Lukosch, Klebl and Buttler (2011) further suggest that storytelling can be understood as well as employed only in consideration of the context in which stories are being told.

Johnson (2006a) relates that strategic conversation is a particular form of conversation that involves intentional articulation of organisation resources, systems, procedures or plans, in affirmation of their value or detriment to strategy; or to seek clarification and/or modification of how barriers to desired outcomes are to be overcome. Strategic conversation is separable from the related construct of strategic thinking in that:

I. It occurs throughout the organisation and not just in the senior management domain.
II. It involves explicit communication between staff members.
III. And recognises that strategy conversation is quite separate from strategy planning and occurs before, during and after strategy planning in both a formal and informal basis.

Johnson differentiates strategy discourse and strategy conversation; where the former explores in-depth a topic to an extent that it seeks to change perception of social and organisational reality; whereas the latter is broader in that it embraces dialogue, debate, discussion, on several topics, perhaps simultaneously, and addresses broader issues to similarly change perception. Johnson further argues that conversation is perhaps a better term to pair with 'strategic' in examining organisational communications at a strategic level as the term is inclusive of communication styles likely to be used in strategy discourse.

It may well appreciate that there is a need to recognise that strategy discourse is a self-determining and recurring phenomenon (Al-Amoudi and Willmott 2011), but researchers may

depreciate the extent to which individuals use discursive artefacts, such as ‘‘discourses of strategy’’ to creatively and flexibly produce credible and coherent representations of self and their world view for highly occasioned and context-specific purposes (Potter 1996). Knights and Morgan (1991) were the first scholars to problematise what Ezzamel and Willmott (2010) refer to as ‘‘rationalist’’ approaches to strategy, as a more or less linear relationship with specific outcomes that are performance related. Instead, Ezzamel and Willmott argue, strategy represents not an objective attribute of organisation but is rather a linguistic construction of an organisation’s activities with specific historical and cultural conditions of possibility. From this perspective, strategy discourse does not simply reflect what an organisation does or is, but rather produces specific categories of action and experience that act, recursively, to shape action and experience (Knights and Morgan 1991). Foucauldian analysis of strategy as discourse was intended to draw attention to how taken-for-granted categories of experience such as for example markets, competition, profit margins and strategists are not pre-given or objective categories but are brought into being by the discourse of strategy and therefore, like any other discursive formation, subject to contestation and potential transformation.

Mantere and Vaara (2008) for instance, looked at how different strategy discourses operate to produce certain groups of actors as those with more or less authority to speak or act as strategists, tracing how dominant discourses, which tend to imbue senior managers or organisational elites with most authority in this respect, impact on the material and discursive manifestations of strategic actions. Other studies have examined how specific practices, such as bullying in the workplace, that are the products of strategy discourse, act to re-constitute the meanings of the roles occupied by particular categories of employees, investing them with more or less legitimacy (Ezzamel and Willmott 2008); and through critical discourse analysis, how human resource managers enact symbolic violence on employees who raise claims of bullying against their managers by attributing managerial bullying behaviours to legitimate performance management practices (Harrington, Warren and Rayner 2015). On a more positive note, Lehmann-Willenbrock *et al* (2017) assert that the ‘tone’ of conversation in a team can converge a

'mood' and provide a contagion beyond the conversation itself and the caucus of the team; and may reflect a collaborative nature salient beyond the team setting.

There has also been work examining how strategy discourse is used to legitimise and naturalise particular actions, activities and artefacts such as airline alliances in Vaara, Kleymann and Seristö (2004); or strategic plans in Vaara, Sorsa and Pälli (2010); and Samra-Fredericks (2005) examined how actors can use rhetorical skills to position themselves as knowledgeable in terms of strategic planning, enabling them to obtain power and authority. Here the focus is on strategy not as a noun (what an organisation is or has) but as a verb (strategize); what strategy does. This strategy as practice literature has used the idea of strategy as discourse to examine how dominant ideas about strategy come to influence how it is enacted in organisations. It may be argued that strategy conversation develops from the basis of the mental models already in place; therefore, any new discourse to an organisation will be interpreted in terms of what is already understood and accepted by the individuals within it. Peirce (Bergman 2009) would argue that actors do not create new knowledge, actors create new signs, and from this, a new narrative in which actors participate. Balanced scorecards are a means of agreeing the nature of the story, they collect signs, and therefore may define the nature of the language game. Language games are important to IC as IC is created through talk and actions between actors, characterised by continuous creation, modification, destruction and reconstruction of concepts. Narayanan and Fahey (1982) who cite organisations as political entities and coalitions, motivated by scarce resources, also suggest that analysis of the conversation and discourse around the decision-making process, in itself, is insufficient to explain how strategic choices are made and argue the need to investigate how strategies emerge, in order to understand how choices are made.

Fontanille (2012) links the act of discourse as an act of annunciation and that that produces a semiotic function. Fontanille argues that this semiotic function occurs as actors accomplish a division between our exteroceptive and interceptive worlds. This world takes the form of "taking a position". The transitive nature of "taking a position" is the act of prolonging an existing axiom whilst in the process of creating a new axiom via the process of semiosis. Strategy conversation is

the means to an end that seeks to reduce complexity by defining a common frame of reference in the face of uncertainty and turbulence. It enables people within the organisation to know which signs to look for against the disruptive organisational noise in the background of the business environment.

Participants engaging in strategy conversation are actors seeking to orientate the organisation. A strategic conversation is one that allows space for the changes and developments required to meet an uncertain future, and at the same time maintain cohesion and coherence. That is to say that the aural charivari of strategic conversation should give rise to any ocular paradigm change that may be necessary. It does this by resolving the conversation into a consistent narrative, generally composed of other stories, in which discussants can become actors in the story as it develops a new beau ideal in the face of change in its operating environment. Jarzabkowski and Whittington (2008) believe that narrative is critical to sense making in organisations and that narrative in many forms inherent in strategy discourse occurs at many levels within the organisational management structure. The notion that this discourse is the property of organisations has been contested by many who study strategy as practice, rather they assert that it is a people orientated construct in the context of social engagement (Jarzabkowski and Whittington 2008) that can and should be studied through the lens of theories of social practice. Prior to Jarzabkowski and Whittington, Barry and Elmes (1997) argued strongly for the potential of a narrative approach to strategy. They define narrative as 'thematic sequenced accounts that convey meaning from implied author to implied reader' and proposed that the narrative metaphor could be relevant to 'both the telling' of strategy as a form of fiction that creates a story about the future.

2.4.1 Narrative and Discourse

In the previous section I discussed the nature of discourse in strategy conversation and introduced the notion that semiosis creates their own semiotics and allows actors to perhaps take a new position. This section discusses the basis of narrative and discourse in strategy conversation. Discourse is generally accepted as a unit of language, especially spoken language,

which is longer than the sentence. Narrative is rooted in narration, relating to or involving the art of storytelling. The discussion centres on the Foucauldian view of two of the strongest motivating forces that determine the position people take in strategy conversation, truth and power (Foucault, M. 1980). In an interview with Alesandro Fontana and Pasquale Pasquino that initially appeared as "Intervista a Michel Foucault", in Microfiseca del Poetere, the chaotic occurrences of history are conflicts of truth and power (Einaudi 1977) . In this interview historical events are seen by Foucault as an exercise in the exchange of power where the intensity of power struggles between actors intensifies as the number of actors in the discourse increases (Foucault 1980).

The reciprocal nature of this exchange inclines towards more senior managers according to the various forms of power relations in the network and the nature of power exchange (Martin 1988).

Each society creates a "regime of truth" according to its beliefs, norms and values. Foucault asserts that the creation of truth in contemporary western society with five traits: the centring of truth as deductive; accountability of truth as evidential; the diffusion and consumption of truth as communal; the control of the distribution of truth as discriminating; and the fact that it is "the issue of a whole political debate and social confrontation." Individuals would do well to recognise that ultimate truth, "Truth," is the construct of the discriminating forces that command the majority of the power within a community discourse. There is no truly universal truth as the intellectual cannot convey universal truth. The intellectual must specialise and specify, to connect to one of the truth-generating conventions within the strategy community.

Foucault states: 'Truth' is to be understood as a system of ordered procedures for the production, regulation, distribution, circulation and operation of statements. 'Truth' is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces, and which extend it. Because of this, Foucault sees "the political problems of intellectuals not in terms of 'ideology,' but in terms of 'truth' and 'power.'" The question of how to deal with and determine truth is at the base of political and social strife. This may suggest that truth and power force actors in strategy conversation to take a position at one of two polar opposites; or indeed adopt a more neutral position. Especially so if researchers accept

Fontanille's view that discourse is the act of annunciation; and that that produces the semiotic function that allows actors to take a position; and the transitive nature of this act prolongs the act of taking a position.

This section researched the nature of discourse and narrative and the Foucauldian view that truth and power are central to our taking a position in strategy conversation. The next section discusses text processing (semiotics) and discourse processing as not just language processing but also knowledge processing. Foucault argues that discourse processing is controlled at all levels by context models that manage the expression of knowledge in discourse, for instance by asserting, presupposing or completely leaving such knowledge implicit.

2.4.2 Discourse Analysis

Discourse analysis seeks to examine language as a form of cultural and social practice and is an approach which allows the description and interpretation of social life as it is represented in talk and texts (van Dijk 2003). He goes onto assert that critical discourse analysis focuses particularly on the relationship between power and discourse, studying the way in which 'social power abuse, dominance, and inequality are enacted, reproduced, and resisted by text and talk in the social and political context'. Discourse analysts examine spoken, signed and written language, and may focus on any aspect of linguistic behaviour, from the study of particular patterns of pronunciation, through word choice, sentence structure and semantic representation, to the pragmatic analysis of how actors organise speech encounters (and any combination of these in spoken, written and signed discourse).

The phenomenon of how certain stories and narrative come to become recontextualised is well known. The critical approach to discourse aims to challenge such practices as 'naturalised'; in other words, when one way of seeing and interpreting the world becomes so common that it is accepted as the only way (Harrington, Warren and Rayner 2015). The operationalisation of discourses is both a matter of dialectical relations between discourse and material reality, and 'intra-semiotic' dialectical relations between discourses and genres and styles (Chouliaraki and Fairclough 2010). Discourse researchers such as David Knights have drawn on sociological

theories of language to point to how discourse shapes strategy. The discourse perspective highlights how mastery of strategy language and jargon can be a 'resource' through which stakeholders establish a position to gain influence and power and establish their legitimacy and identity as strategists, or not as the case may be (Knights 1992) .

Operational decisions are linked to strategy for two reasons (Jarzabkowski and Whittington 2008). First, if the operational aspects of the organisation are not in line with the strategy, then, no matter how well considered the strategy is, it will not succeed. Second, it is at the operational level that real strategy advantage can be achieved. Integration is required for effective strategy . Managers have functional and operational boundaries to cross to deal with strategic issues and come to agreements through storytelling and narrative. Change is driven by strategy. Change is often difficult because of the heritage of resources and because of organisational culture. It is at the operational level that real strategic advantage can be achieved. Because strategic management is characterised by this complexity, decisions and judgements are made based on conceptualisation and rationalisation. (Johnson, Scholes and Whittington 2008).

2.4.3 Discourse and Language

This section reviews forms of text (symbols) and discourse analysis as part of language processing, a causal component of knowledge processing as the basis for argumentation. (van Dijk 2008) asserts that researchers may summarise what researchers now know about text processing is that discourse is not just language but also knowledge processing. Such discourse is controlled at all levels by models of convention in the discourse community that manage the expression of knowledge in discourse, by asserting, presupposing or completely leaving knowledge in an implicit state. Van Dijk (2008) also suggests that the nature of stories that are explicit in strategy are presupposed by management and constructed in such a way that conforms to social considerations such as who the knowledge authorities are. This presupposes considerations on the nature of these artefacts as to who's discourses are more or less credible and who has active or passive access to what kind of discourse and therefore whose discourses are legitimate or not?

Thus, if researchers want to study groups as communities of knowledge, then they have review their forms of discourse, and how knowledge is expressed and especially presupposed and taken for granted, in such a community. In this sense epistemological discourse analysis is the study of the way knowledge is implicitly or explicitly transferred (van Dijk 2008). A structural construct of discourse may also feature a cognitive component underlying an interpretive representation and process of the way knowledge representations influence the interpretation of general knowledge by the recipients. Van Dijk (2008) broadens the definitions of the cognitive components in discourse analysis, which can be seen at Figure 6: Cognitive Components in Discourse Analysis (van Dijk 2008) below.

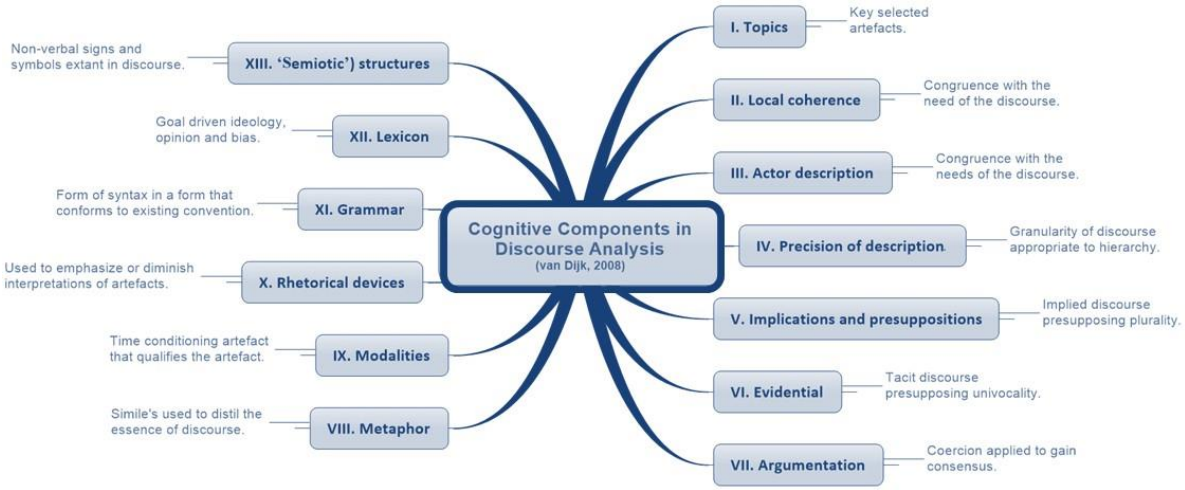


Figure 6: Cognitive Components in Discourse Analysis (van Dijk 2008)

The construct of discourse analysis generates an almost inexhaustible set of definitive possibilities in the unfolding discourse (Wittgenstein 1983; Waismann 1965). The representations of social actions by actors engaged in discourse do not exist in a vacuum nor are they in themselves neutral disclosures of intent, they exhibit cognitive processes from which intent may be implied or explicated according to current disposition of the discourse. In the context of critical discourse analysis regarding texts, ideology and power, empirical research focuses on the affinity between discourse and wider social structures. While texts may be vital to this enquiry this analysis require a Foucauldian view of 'text' as more complex; in that it can refer to a speech or spoken discourse, written documents, visual images, or some combination of these three.

Fairclough (2003) argues the notion that research on social interaction is focussed on language, hence the broader concern with discourse analysis as an aspect of social change.

This section reviewed the link between text (semiotics), discourse, and knowledge processing in the nature of who produces what knowledge for whom, and how such knowledge is discursively distributed, in particular the legitimacy; access; and credibility of such discourse. And went on to discuss the active or passive nature of access to what kind of text, talk or discourse extant. Thus, if researchers want to study semiotics as a method for strategy, researchers first of all must look at their forms or text and talk, and how knowledge is expressed and especially also presupposed in social networks, that is, taken for granted, in such a community.

Social networks exist for a reason, either to make an existing strategy work or, alternatively, to by-pass it, due to actors who may be wedded to the security of known paradigms and won't change. Merely codifying strategy is vital but is nowhere near enough to anticipating entropy in strategy discourse. In many businesses it is this gap that increases in size due to management nascence as they focus on strategy output, by which time it is too late, rather than strategy input (discourse through social networks).

2.4.4 Social Constructivism

Constructivism as a social theory is the more general theory about the social world, social action; and the relationship between artefacts and actors. In social theory, constructivists emphasise the social construction of reality. Human relations consist of thought and ideas and not essentially of material conditions or forces (Jackson and Sørensen 2006). Whereas Wendt (1999), argues that social structures have three elements: shared knowledge, material resources, and practices. Social structures are defined, in part, by shared understandings, expectations, or knowledge. These constitute the actors in a situation and the nature of their relationships. The construct of the social world is made by the actors within it in such a way that makes it intelligible to them. Jackson and Sorensen further argue that the social world is a world of human consciousness: of thoughts and beliefs, of ideas and concepts, of languages and discourses, of signs, signals and understandings among the actors and social groups. According to social constructivism,

knowledge is a human product, which is socially and culturally constructed in an active manner and not something which can be discovered (Gergen 1999).

The social world is a subjective domain: it is meaningful to the actors who make it and live in it, and who understand it precisely because they have made it and they are at home in it. The social world is in part constructed of artefacts. But it is the ideas and beliefs concerning those artefacts that are most important in what they signify in the minds of the actors. The main focus for constructivists are the key cognitive artefacts that help to form the subjective beliefs such as conceptions and assumptions that may be shared with the strategy community (Tannenwald 2005). Ideas must be widely shared to matter; nonetheless they can be held by different groups, such as organisations, formal management structures and informal peer groups. Tannenwald (2005) identifies four major types: ideologies or shared belief systems; normative beliefs; cause-effect beliefs; and policy prescriptions:

I. Ideologies may be regarded as doctrinaire that reflect the aspirations of a group.
II. Normative are principled beliefs that distinguish right and wrong based on a values protocol that specifies criteria for distinguishing between the two.
III. Causal beliefs are beliefs about cause-effect or means-end relationships as a means of designing a course to achieving objectives.
IV. Policy prescriptions conform to a prescribed set of regulations for solving particular problems.

The debate about basic theory is of course relevant for the constructivist ambition of demonstrating that 'ideas matter', but researchers need to enquire as to why they matter? Possibly they are the result of changing conditions; or perhaps they matter as a form of justification in discourse; and to what extent are they influencing behaviour or perhaps end up being ignored for a wide variety of reasons. How exactly is it that ideas matter? Do changes in ideas always come before changes in material conditions? Do ideas guide policy or are they justifications for policy? Should ideas be seen as causes of behaviour or should they rather be seen as constitutive elements that define what international relationships are all about?

When any given group is asked to make a decision, the group's performance remains susceptible to productivity deficits. Janis and Mann (1977) showed that group decision-making is prone to

'groupthink', which involves diminished objectivity, logic and rationale. According to Janis there are several notable 'symptoms' of groupthink (Kamau and Harorimana 2008). Janis argues that, during groupthink, members conceal or downplay information that contradicts the group's prevailing view, managing the information that the leader and other group members obtain. Stasser and Titus (1987) argue that information supporting the group's prevailing view is likely to be relayed whereas information contradicting the group's view is not likely to be relayed. Janis called such selectivity 'defensive avoidance' and they postulated that it is most likely to happen after a decision has been made because group members want to avoid experiencing cognitive dissonance. Stasser and Titus further investigated whether groups maximise all the information available to them before making a decision, particularly when each member has unique bits of information. They proposed a biased information sampling model, which argues that group members rarely exhaust their store of information during discussion but sample a subset of the information to contribute to discussion. As Harrington, Warren and Rayner (2015) discovered, making a decision may be based on the exercise of power that is not simply vested in the individual through the legitimacy of hierarchical or social influence; it is enacted through discourse surrounding organisational practices that may privilege management whilst muting the voice of the employee.

However, if all actors engage in rhetorical action and do not share any normative commitment other than the procedural norm of consensus-seeking, they will find themselves trapped in an endless debate, unable to persuade others and unwilling to move. To overcome this situation and to turn a dynamic of rhetorical action into action, suggests that actors must trust their interlocutors. Actors engaged in rhetoric may find themselves trapped between the logic of appropriateness and the logic of consequences. Rhetorical entrapment refers to the inability to pursue a preferred option that violates a prior rhetorical statement while refusing to comply with normative standards because it would undermine their interests. Indeed, actors involved in debate soon became rhetorically trapped, their normative commitment to find a consensual solution to a problem conflicts with deeply rooted practices of strategic bargaining (Morin and

Gold 2009). Morin and Gold (2009) further add that this grey zone between behaviours studied by constructivists and those studied by rational choice theorists is increasingly being studied. In their study of WTO negotiations over access to medicines, Odell and Sell (2009) observe that discursive frames, even if not internalised, seems to affect behaviour. From this observation, they conclude that 'constructivist theories of communicative action' might be a promising lens through which to study the negotiation process (Morin and Gold 2009).

Open discussion of the biases that may be undermining decision making is invaluable. It can be stimulated both by conducting post-mortems of past decisions and by observing current decision-making processes (Lavallo and Sibony 2010). Such as:

I. Are actors at risk of being too action oriented in this meeting?
II. Do actors see someone who thinks they recognise a pattern but whose choice of analogies seems misleading?
III. Are biases combining to create dysfunctional patterns that, when repeated at an organisational level, can become cultural traits?
IV. For example, is the combination of social and status quo biases creating a culture of consensus-based inertia?
V. This kind of discussion may help uncover the biases to which the decision-making process under review is particularly prone.

Lavallo and Sibony (2010) go on to state that organisations should consider selecting mechanisms that are appropriate to the type of decision at hand in terms of cultural change and the decision-making styles of their leaders. For instance, some organisations counter bias by organising a challenge to business unit plans as part of their annual planning cycle; and counter biases by asking strategy actors who present a recommendation to share the evidence supporting it, so that other managers can try to discern alternative patterns. Psychologists and behavioural economists have identified a number of cognitive biases that have the largest impact on business decisions. A recurring theme about cognitive biases is their close relationship with the rules of thumb and mind-sets that often serve managers well. Consequently, many experienced managers pride themselves on pattern-recognition skills cultivated over the years. For example, seeking consensus during the decision-making process is often not a failing but a condition of success. And valuing stability rather than "rocking the boat" or "fixing what ain't broke" is a sound

management precept. What is of interest to this research programme is the use of social constructivist models described in this paper as possible frameworks for future research into knowledge management through storytelling and narrative in the latter stages of the knowledge continuum.

2.5 Chapter Summary

This chapter elaborated on the aims and objectives of this research through existing discourse to establish a better understanding of strategy narrative. To understand the context of this research thesis it was necessary to outline the genesis of this story using three case-studies (Annex 1: Case Studies, 229) to review the construct of knowledge management through storytelling and narrative.

This initial research base diagnosed existing research base as one relating to knowledge transfer through social architecture in an organisational context. As a consequence, this early research began to develop the notion of knowledge transfer through storytelling and narrative as a basis for organisational learning set in strategy narrative. However, to understand the nature of discourse and narrative in strategy, that may so mediate the transfer of knowledge, the researcher turned toward the field of semiotics to understand the nature of construction of artefacts in strategy discourse as a form of social constructivism. Chapter Three seeks to expand on the notion of why actors in strategy may take a position through the lens of semiotic theory.

3 CHAPTER THREE – A Semiotic View

3.1 Introduction

Chapter Two developed the notion of a knowledge continuum as a basis for organisational learning set in strategy narrative set in a landscape of social constructivism. Chapter Three develops this philosophical position through the lens of semiotic theory; and the importance of semiotics, to storytelling and narrative in the context of social norms that regulate people's behaviour toward establishing a position in strategy. In this study, the focus is not so much on the actors of discourse, but what are the influences on why strategy conversation changes as the nature of the story is changed. The social norm concept helps researchers in understanding organisations. Organisations can be described in terms of cultural and legal norms that regulate people's behaviour. The concept of social norms is socially rooted in a shared knowledge about behaviour in a community. This is to distinguish them from a more general concept of norms where norms may be universally valid and may have the meaning in terms of strategy artefacts. According to Stamper,

> "Thus, a community builds its knowledge of what to do (behavioural norms), how things should be judged (evaluative norms), how things happen (cognitive norms), but also what exists in our world (perceptual norms)." (Stamper *et al.* 2001 p, 115-171).

Stamper further suggests that communities exist to share knowledge for a shared particular advantage, usually transferred according known norms, beliefs and values; and as such these communities may exhibit cognitive behaviour common to those so engaged (Stamper *et al.* 1997). According to Stamper, this normative behaviour may also regulate what information is needed as all knowledge can be seen as consisting of norms and attitudes, however it should be remembered that attitudes are norms without conditions.

3.2 The Semiotic Landscape

These norms are the semiotic artefacts and socio-semiotic processes of speech commodification, storytelling, narrative, communities of practice and discourse communities (Foucault 1980). They

are by now reasonably well understood, and could provide all we need, without relying on tacit domains of knowledge (Williams. 2006) .

The field of semiotics as characterised by Saussure, and Peirce et al (Jastroch and Marlowe 2010), follows the notion that communication is based on codes consisting of symbols and signs interpreted by cultural convention, which has numerous implications for the sourcing, sharing and use of knowledge. Such implications of semiotics for knowledge management are discussed in the Chapter Two at 2.2 above, in particular for the externalisation, internalisation and transfer of knowledge in collaborative settings. A prerequisite for a sign to be understood by a recipient is correct decoding. In order to be able to decode, a code must be available. The underlying hypothesis of semiotics is that any communication system works on the basis of codes. Codes are systems of symbols which are determined by cultural convention for the purpose of representing information and transferring it from a point of origination to a destination (Jastroch and Marlowe 2010). They must be shared so that decoding becomes possible. According to Eco cited in (Jastroch and Marlowe 2010), a code can be vague or weak (change quickly), incomplete, temporarily provisional, or inconsistent. Indeed, the semiotic process – if there is any – will not lead to understanding.

Semiotics involves the study of 'signs' in language, and of anything which 'stands for' something else. In a semiotic sense, signs take the forms of words, images, sounds, gestures and objects. Semiotics has variously been defined as a sign that may be described as a thing, the value or meaning of which is bestowed upon it by those who use it; or, a sign is anything which is determined by something that so determines an effect that the latter is thereby mediately determined by the former (Atkin, A. 2008). Semiotics, also called Semiology, is the study of signs and sign-using behaviour. It focuses on meaning derived rather than the choice of words. This theory of signs tries to generate laws & principles that explain the signification process. American philosopher Charles Sanders Peirce categorised signs into three main types:

I. an icon, which resembles its referent (such as a road sign for an accident-prone area);
II. an index, which is associated with its referent (as smoke is a sign of fire); and

III. a symbol, which is related to its referent only by convention (like the red light at a traffic signal).

Peirce (1931) demonstrated that a sign can never have a definite meaning, and that the meaning must be continuously qualified. This implies that even though people seemingly use the same language, generation of meaning is a unique internal experience; which means that no two people will generate identical meanings from any given construct. His point can be further understood by looking at the work of Barthes. Barthes, Sociologist and Lexicologist, also provided an explanation of signs. He too, postulated that signs have three parts, viz:

I. The referent.
I. The signifier or symbol.
II. The signified or thought.

An object or animal could be a referent. For example, the dog could be a referent. The letters D O G would signify the actual animal. However, a range of symbols can be associated with the same object or animal. For example, the dog could produce affectionate thoughts of 'a pet' or repulsive thoughts of a 'greedy animal' or even spiteful. Thus, denotative systems consisting of signs and symbols generate thoughts that lead to comprehension (Barthes 2013).

Moreover, Barthes relates that perception is affected by the relationship between actors as well as the situation or context. It is possible then that the interlocutor may have a positive undertone in mind while the listener is offended. Therefore, the focus is on meaning derived rather than the choice of words, as mentioned earlier. From the work of Saussure, Peirce and Barthes the scope for distortion is immense simply because no two individuals can be expected to derive identical meanings from any given construct, as the derivation of meaning is greater than the sum of the meanings of the signs, signals, and symbols that constitute the construct. This relates to why a set of signs and symbols in one discourse may carry a particular meaning than that in another discourse that may have a contrary view. The differences between signs, signals, and symbols can be listed as follows:

I. A sign essentially contains meanings of an intrinsic nature.
II. A signal is a construct or attempt at creating extrinsic meanings and essentially brings about a change in the existing state of affairs (like a traffic signal, for example)

III. A symbol, as stated by Peirce, evolves from convention. According to Alfred North Whitehead, the English mathematician and philosopher, who collaborated with Bertrand Russell on Principia Mathematica (1910–13): "symbols are analogues or metaphors (that may include written and spoken language as well as visual objects) standing for some quality of reality that is enhanced in importance or value by the process of symbolisation itself."

Symbolic communication is an inherent part of all human behaviour and is used consciously as well as unconsciously; therefore, it is an important part of communication in groups (in particular) and society (in general), as Chandler (2007) argues that words and signs may be regarded as symbolic metaphors which play an important role in all types of interactions through which participants in strategy derive a sense of identity. Semiotics has variously been defined as a sign that may be defined as a thing, the value or meaning of which is bestowed upon it by those who use it; or, a sign is anything which is determined by something that so determines an effect that the latter is thereby mediately determined by the former (Atkin 2008) . Actors are driven by a desire to make meanings, distinctively, actors make meanings through our creation and interpretation of 'signs'. According to Peirce (1931), 'we think only in signs'. Signs take the form of words, images, sounds, odours, flavours, acts or objects, but such things have no intrinsic meaning and become signs only when actors invest them with meaning (Chandler 2007) .

Essentially there are two models that dominate the field of semiotics, that of the linguist Saussure and that of Peirce the philosopher and logician. Saussure argued a dyadic model where sign is composed of a signifier, which is the form the sign takes and the signified as the concept the sign represents. Whereas Peirce offered a triadic approach where the representamen (signifier) is the form the sign takes; the interpretant (signified) is the sense made of the sign; and, additionally, an object to which the sign refers.

Figure 7: Semiotic Process after Saussure

Saussure's is a rationalist structuralist view; whereas Peirce's is a behaviourist positivistic view (Botan and Soto 1998). The Saussure focus makes it less able to describe the process of signification where signification is the relationship between the signified (the mental construct of the sign) and the signifier (the material form of the sign). Peirce in (Bergman 2009) , on the other hand, focuses on communication as an ongoing process of signification, where Peirce argues a triadic approach between what he defines as the Representamen; the Object; and the Interpretant. This triad acts as a valance in the way actors interpret signs; rightly or wrongly. Peircean semiotics is seen as a philosophy of communication, in addition to its being a theory of signs that may be applicable to the study of rhetoric (strategy discourse). Peirce defines rhetoric as a condition under which a sign may determine the interpretant sign of itself and of whatever it signifies, or may as a sign, bring about a physical result (Bergman 2009) .

> Saussure: semiology is a science which studies the role of signs as part of social life.
>
> Charles Peirce: "semiotic" was the "formal doctrine of signs" which was closely related to Logic. For Peirce, "a sign... is something which stands to somebody for something in some respect or capacity." He declared that "every thought is a sign".
>
> Eco: semiotics is concerned with everything that can be taken as a sign.
>
> Barthes: semiology aims to take in any system of signs, whatever their substance, and the complex associations that form the content of ritual, convention or public entertainment: these constitute, if not *languages*, at least systems of signification.
>
> John Sturrock: whereas semantics focuses on *what* words mean, semiotics is concerned with *how* signs mean.

C. W. Morris (deriving this threefold classification from Peirce): semiotics embraced semantics, along with the other traditional branches of linguistics: *semantics*: the relationship of signs to what they stand for; *syntactics* (or *syntax*): the formal or structural relations between signs; *pragmatics*: the relation of signs to interpreters.

Semiotics is important because it assists actors in strategy not to take "reality" for granted or as a discourse having a purely objective existence independent of human interpretation. Rather, it teaches us that reality is a system of signs. Studying semiotics can assist participants in the strategy conversation to become more aware of reality as a construction and of the roles played by those engaged in the conversation and others in constructing it. It can help engaged in the strategy conversation to realise that information or meaning is not "contained" in the world or in books, computers or audio-visual media. Meaning is not "transmitted", it is actively created according to a complex interplay of codes or conventions of which participants are normally unaware (Sebeok *et al.* 1987).

Becoming aware of such codes is both inherently fascinating and intellectually empowering. Semiotics provide a worldview and is instructive in the notion that there is no way of understanding anything except through signs and codes into which they are organised (Chandler 1998). Studying through semiotics, creates an awareness that these signs and codes are normally transparent and disguise the task in "reading" them. Living in a world of visual signs, develops our understanding that not all signs are what they appear to be. By making more explicit the codes by which signs are interpreted may perform the valuable semiotic function that habituates signs and serves an ideological function. Deconstructing and contesting realities can reveal realities that are privileged and those that are suppressed. The study of signs is the study of the development and maintenance of reality making, without which would leave others to control that meaning.

Chandler goes onto relate that semiotics provides a possible unifying conceptual framework, methods and terms for use across a range of signifying practices including gesture and posture. Semiotics may not itself be a discipline, but it is a focus of enquiry, with a central concern for meaning-making practices which conventional academic disciplines treat as peripheral. As David Sless notes, "we consult linguists to find out about language, art historians or critics to find out

about paintings, and anthropologists to find out how people in different societies signal to each other through gesture, dress or decoration. But if researchers want to know what all these different things have in common then researchers need to find someone with a semiotic point of view, a vantage point from which to survey our world" (Sless 1981). Semiotics is invaluable to any type of enquiry striving to look beyond the apparent content of texts. Structuralist semiotics seeks to look beyond the facade of the observed in order to discover the underlying organisation of phenomena in search of hidden meaning and insight and exploring implied meaning. The more obvious the structural organisation of a text or code may seem to be, the more difficult it may be to see beyond such surface features (Langholz Leymore 1975).

Social semiotics is instructive in how the same text may generate different meanings for different readers (Langholz Leymore 1975). Semiotics can also help realise that whatever assertions seem obvious, natural, universal, given, permanent or incontrovertible are generated by the ways in which sign systems operate in discourse communities. Semiotics can help to make researchers aware of what is taken for granted in representing the world, reminding researchers that actors are always dealing with signs, not with an unmediated objective reality, and that sign systems are involved in the construction of meaning.

As an approach to communication which focuses on meaning and interpretation, semiotics challenges the reductive transmission model which equates meaning with "message" (or content). Signs do not just "convey" meanings but constitute a medium in which meanings are *constructed*. Semiotics helps researchers to realise that meaning is not passively absorbed but arises only in the active process of interpretation. Wilden (1987) has observed that "all language is communication, but very little communication is language". In an increasingly visual conscious age, an important contribution of semiotics from Barthes onwards has been a concern with imagery as well as linguistic signs, particularly in the context of discourse. Semiotics encourages observers not to dismiss an artefact less worthy than another. Potentially, semiotics may help researchers to realise differences as well as similarities between various modal qualities of the artefact. It could help us to avoid the routine privileging of one semiotic mode over another, such

as the spoken over the written or the verbal over the non-verbal. Those who cannot understand such environments are in the greatest danger of being manipulated by those who can. For Peirce, "the universe... is perfused with signs, if it is not composed exclusively of signs" (Peirce 1931).

Semiotics is often criticised as "imperialistic" (Chandler 2007), since some semioticians appear to regard it as concerned with, and applicable to, anything and everything, encroaching on almost every academic discipline. Semioticians do not always make the limitations of their methodology clear and therefore; semiotics can be uncritically presented as of limited functionality. Sometimes semioticians present their analyses as objective explanation rather than subjective interpretations. Yet few semioticians seem to feel much need to provide empirical evidence for these interpretations, and most semiotic analysis is connotative and unsystematic (or alternatively, generates elaborate taxonomies with little evident practical application). In practice, semiotic analysis invariably consists of isolated readings rather than the commentaries of several analysts on the same artefacts, to say nothing of evidence of any kind of consensus amongst different semioticians. John Sturrock cited in (Chandler 1998) notes that some commentators, such as Mikhail Bakhtin - a literary theorist - have used semiotics for the "revelatory" political purpose of "demystifying" society, and that such approaches can lead to "loaded readings" of society simply as an ideological conspiracy by one social class against the rest. Cook adds that "a weakness of the semiotic approach is its exclusive devotion to similarities, and then an air of finality once these similarities are observed, which blinds it to what is unique" (Cook 2003). Semiotics is not, never has been, and seems unlikely ever to be, an academic discipline in its own right. It is now widely regarded primarily as one mode of analysis amongst others rather than as a "science" (Chandler 1998) of cultural forms.

3.3 Charles Saunders Peirce

Semiotics has variously been defined as a sign that may be defined as a thing, the value or meaning of which is bestowed upon it by those who use it; or, a sign is anything which is determined by something that so determines an effect that the latter is thereby mediately determined by the former (Atkin 2008). What is of interest here is the use of semiotics as a

possibly, at the early stages of the knowledge continuum, the construct of developing storytelling and narrative to facilitate knowledge transfer.

The triadic approach from Peirce may have the greatest relevance to understanding storytelling and narrative in the transfer of knowledge within the continuum. Peircean semiosis describes the production of meaning as an action of the mind of the interpreter, brought about by a sign that stands for an object Botan and Soto (1998); and Desouza and Hensgen (2005) further argue that a central feature of semiotics is the ability, through analysis and reconstruction of signs, to generate innovation. Fundamentally Peirce argues that it is stakeholders who give meaning to signs through acts of signification and that it is this process of meaning making that mediates all acts of human communications. In an organisational context communication patterns typically comprise of social rituals, constructs, norms and speech-acts (French 2009). Additionally, Stamper's seminal work (Stamper 1973) on the development of a semiotic framework may be of value in researching semiotics in the knowledge continuum. The aim of Stamper's semiotic ladder is to help define signification in an organisational context to describe a semiotic picture of the human, organisational and social contexts that may frame knowledge transfer.

3.4 Peirce – A Triadic Approach

Peirce argues a triadic approach between what he defines as the Representamen; the Object; and the Interpretant. This triad acts as a valance in the way actors interpret signs; rightly or wrongly.

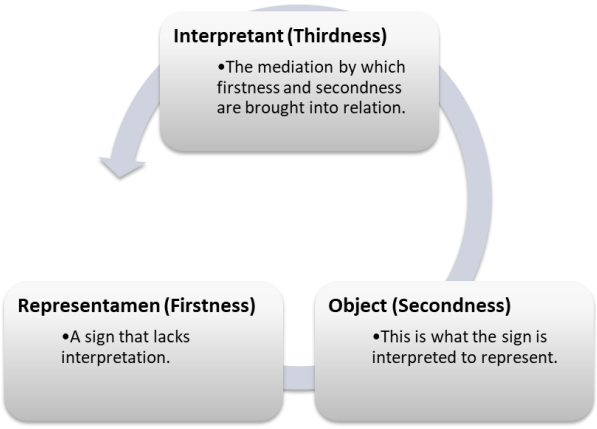


Figure 8: Peirce Triadic Semiotics

Peircean typology of signs has a triadic classification that is hierarchical in nature. Under each there is a trichotomy that attempts to classify the major classes within each. Each of the three terms of semiosis is further subdivided following the three categories: thus, actors distinguish Firstness, Secondness and Thirdness in the Representamen, in Representamen-object relations, and in the way the interpretant implements the relationship between Representamen and object.

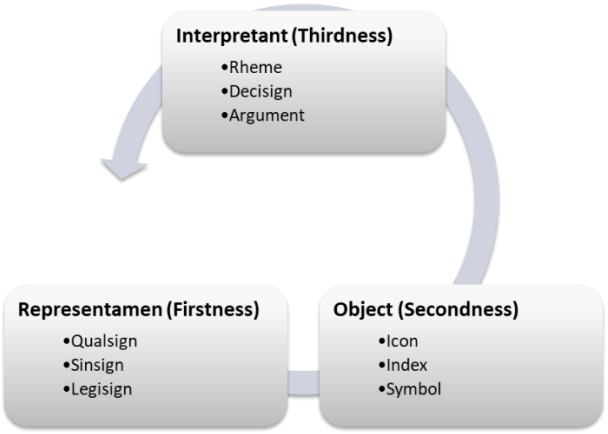


Figure 9: Peirce Trichotomies

3.4.1 Firstness – Representamen

Is a concept that is independent of anything else. Therefore, it is a pure sign prior to interpretation. For example, the sensation of pain without knowing from where it comes, is a state of wholeness and completeness that has no boundaries and corresponds to emotional experience incapable of rationality due to the lack of logic and rationality (Short 2007).

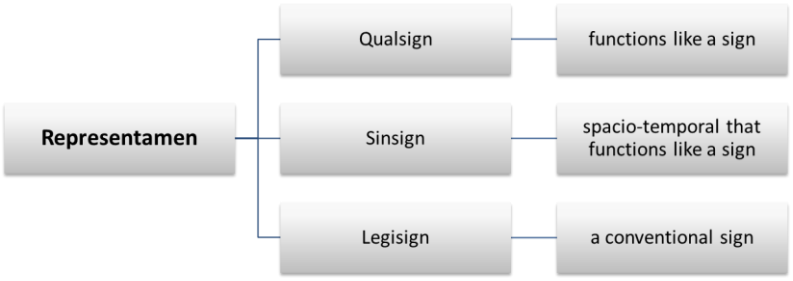


Figure 10: Representamen (Firstness)

3.4.2 Secondness – Object

Corresponds to our beliefs, norms and values interpreted through grammar formed by past experience in discontinuous time where the dimensions of the past enter the present and therefore, corresponds to practical experience on the basis of logical extrapolation (Short 2007) . The linking of the sensation of pain in the jaw to toothache.

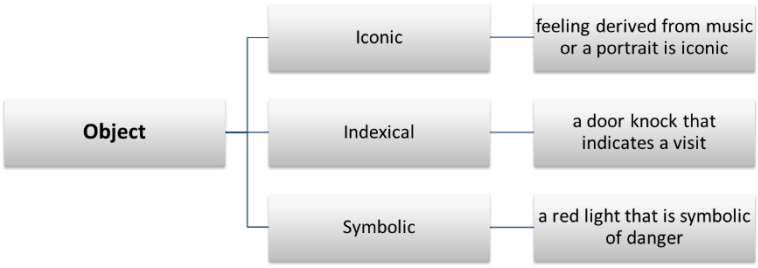


Figure 11: Object (Secondness)

3.4.3 Thirdness – Interpretant

Belongs to the domain of rules and laws (conventions), grammar, but can only be applied in the correct context. Secondness is a category of individuality (knowledge); whereas Firstness and Thirdness conform to generality. That said, the generality of Firstness is on the level of possibility; the generality of Thirdness is on the level of prediction. Thirdness corresponds to the application of knowledge through experience. The sensation of pain and knowing its source allows us to apply experience to deal with it or the consequences of inaction. It is Thirdness that makes communication possible through the process of thought; the use of language (sight, sound, smell, taste, touch); and the display of representation – the act of semiosis (Short 2007).

I. The sign can only represent the object.
II. The object is what the sign represents. The sign can only express something about the object through collateral observation.
III. The Final Interpretant Habit

In theory, the process of semiosis should be unlimited, but in practice it is constrained by the final logical interpretant; force of habit; or defined perhaps by rules that allow interlocutors to achieve consensus in a given context. The Interpretant implements the relationship between the

Representamen and the Object. There is a need to recognise that a habit is formed by the effect of previous signs and signs are catalysts that reinforce habits or change.

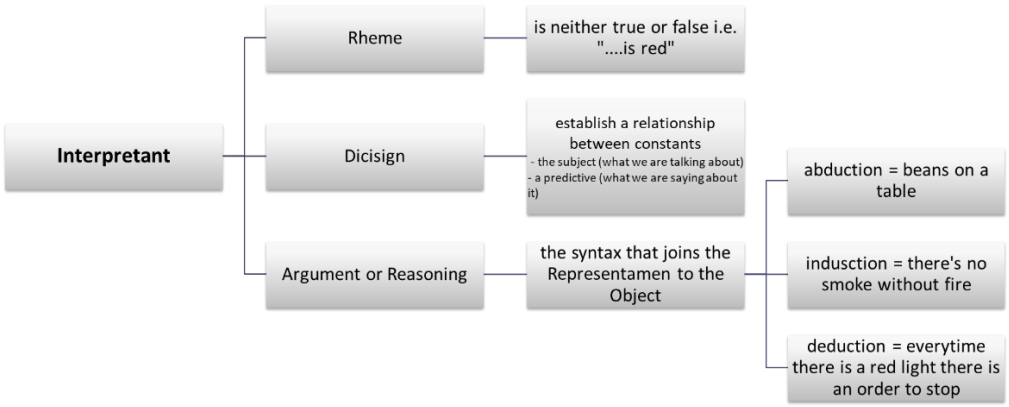


Figure 12: Interpretant (Thirdness)

3.4.4 The Final Interpretant Habit

In theory, the process of semiosis should be unlimited, but in practice it is constrained by the final logical interpretant; force of habit; or defined perhaps by rules that allow interlocutors to achieve consensus in a given context. In Peirce there is the notion that all sign processes, exhaustive in nature, ultimately converge towards a final interpretant to a point where an ultimate opinion is reached, perhaps in the absence of consensus. The Interpretant implements the relationship between the Representamen and the Object. There is a need to recognise that a habit is formed by the effect of previous signs and signs are catalysts that reinforce habits or change (Bergman 2009) .

3.4.5 A note on Abduction

Deduction and induction were studied in depth by the classical philosophers, but no logician before Peirce had recognised the importance or the specific character of this third form of reasoning, which Peirce called abduction. Nonetheless, it is a form of reasoning that happens to be used in the most mundane circumstances as well as in scientific research, and on this point, Peirce anticipates Karl Popper's epistemology (Short 2007).

The interpretive process of abduction (or process of deductive hypothesis) can be described in four stages (Atkin 2008):

I. Encountering an artefact that is unfamiliar and/or unexplained in the lexicon of existing knowledge.
II. Formulation of a hypothesis that attempts to resolve the meaning of the artefact.
III. Deductive reasoning of hypothesis in search of taking a position.
IV. Inductive reasoning to conclude that the results verify the hypothesis, at least provisionally, until there is proof to the contrary.

3.5 The Basis of a Semiotic Approach

One of the issues with literature reviewed to date appears to suggest that, while there has been a great deal of work in these disparate fields, there are no artefacts to draw upon in fields of research to attempt to understand the role of semiotics on knowledge transfer. This will be a key aspect of this research. At the heart of business strategies is the ability of senior and middle managers to interpret meaning and transfer that meaning through storytelling and narrative (Jorgensen and Boje 2006) . This interpretation suggests that interaction between actors within the business seems to change the meaning of strategies through the interpretive lens of Semiotics. These strands of scholarship are drawn together to refocus attention on how client stakeholders interpret and understand strategy put before them in briefing and design phase interactions. This occurs despite stakeholders being actively 'engaged' and 'managed' on strategy through various activities. It is contended that in briefing work, stakeholders relate to symbols with their own personal cognitive interpretations (Dainty, Moore and Murray 2006) . This may result in solutions being interpreted in unforeseen ways that ultimately fail to align with strategy requirements and needs. Semiotics may provide a supportive theoretical framework

Gluch and Raisanen in (Collinge and Harty 2014), also identify the complexity of actual briefing communications, around which client requirements are discussed: Communication is a dynamic and complex mediated discursive practice that both constructs and is constructed by human actors, using semiotic and technical tools. Communication needs to be viewed as social practice, involving the interaction of interlocutors, contexts, semiotic systems, artefacts and technologies.

Each participant in any strategy brings his or her own frames (Robinson 2018), influenced by profession, experience, culture, and others, into developing or comprehending the information exchanged through storytelling and narrative. Since storytelling and narrative is the primary method for transferring knowledge between actors in strategy, differences in these frames set the context for diverse participants' reflexes in (mis)interpreting an artefact, as well as agreeing linguistic definitions for such artefacts. Anecdotally, stakeholders who are not satisfied with what the artefacts represent often respond in disconfirmation (Boehm *et al.* 1999).

Robinson (2018) shares the potential for differences in individual internalisation of strategy conversation is mostly ignored when external indicators suggest agreement and consensus on strategy. Consistent interpretation of a language by its communicators is often taken for granted. This is where jingle fallacies are born. A jingle fallacy is a type of miscommunication between at least two participants where they share the definition of a term or concept which belies an actual misalignment or gap of their semantic or tacit understanding. Due to the latency of discovery and potential for repercussions in resolving the gap, the jingle fallacy can be a pernicious challenge to strategy development and outcomes. In much of the existing literature on system development in general, however, the premise seems to assume that humans consistently and repeatably interpret the information they receive in the process. There appears to be a lack of research that considers the case when different stakeholders share the same terms and corresponding external definitions, yet they hold different internal representations regarding concepts that are critical to a system acquisition or development.

It is this sense of meaning making as actors transfer knowledge that requires a semiotic view on the interpretation of signs and codes in storytelling and narrative that lies at the heart of this enquiry. In his work on the Semiotic Ladder, Stamper's view on signs as physics, empirics and social world; are not that far removed from Peirce's triadic semiotics defined as Representamen, Object and Interpretant. The purpose of these constructs is in an attempt to define a process by which individuals make sense of signs and codes. What they all have in common is context in the sense that actors in strategy seek to establish a position through their interpretation of signs and

codes inherent in strategy narrative. If participant engaged in that exchange choose to influence others in that regard to gain consensus, then that implies the existence of trust. Trust is a judgement, however tacit or habitual, to accept vulnerability to the will of others by granting discretionary power over some good (Warren, 1999).

Placing trust, be it in an institution or an individual, is an act that is based on the interpretation of information that provides the reason to trust in the other's competence and motivations Warren (2004) in (Smith 2010). Key factors that determine the credibility of a cue are the source and the media. For example, in one study, it was found that people evaluated strategy more highly if they have direct contact rather than if they find out information second-hand.

Aspects of trust	Description
Social relationship	Trust is a particular type of social relationship between two social actors (individuals, groups and institutions)
Trustworthiness and trust	Two sides of the social relationship
Domain of trust	A trusts B to do C
Expectations and values	A has expectations that B will fulfil their requisite obligations and these expectations are an expression of A's values
Motivation and competence	For A to trust B, B must be seen as having the motivation and competence to do obligation C
Self-interest and normative motivations	There are two basic types of motivations to encourage trustworthy behaviour: self-interest or normative values

Table 4: Aspects of Trust (Smith 2010)

3.5.1 Sense Making

Top management may set down a strategic direction, but how it is made sense of in specific contexts may, intentionally or not, be left to middle managers. If misinterpretation of that intended strategy is to be avoided, it is therefore vital that middle managers understand and feel an ownership of it. Change levers are not always of an overt, formal nature: they may also be symbolic in nature. Symbols are objects, events, acts or people that convey, maintain or create meaning over and above their functional purpose. They may be everyday things which are nevertheless especially meaningful in the context of a particular situation or organisation.

Change levers	Rationale	Peirce Triad ID
Education	Briefings to internalise strategic logic and trust in strategy management to overcome the direction, speed and clarity of purpose.	1-4; 16; 19; 20; 22; 26; 28; 38-42.
Collaboration	Involvement in setting strategy to facilitate resolution strategic issues, bottom-up?	1; 8; 13; 17; 18; 21; 32-34.
Intervention	Level of control of development of strategy through change agents.	1; 8; 10; 13; 18; 21; 27; 33; 34; 42.
Direction	Authoritarian, command and control, top-down management of strategy conversation.	8; 13; 15; 17; 21; 26-28; 31-35; 38-40.
Coercion	Use of edict and power to get things done.	15; 17; 32; 33; 34-39.

Table 5: Styles of Managing Strategic Change (Johnson, Scholes and Whittington 2008)

Table 6: Styles of Managing Strategic Change above shows alignment of management styles in times of change with Stage One Variable ID in Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant below.

Paradigm change in an organisation will mostly provide significant challenges to existing strategy (Johnson, Scholes and Whittington 2008). Charismatic leaders are mainly concerned with building a vision for the organisation and energising people to achieve a new certainty in times of change. Paramount for those leaders is that organisations are by nature habitual and that they will remain so until there is a worldview that is sufficiently shared by participants across the organisation. Johnson, Scholes and Whittington (2008) suggest that these leaders have a particularly beneficial impact on performance when the people who work for them see the organisation facing uncertainty, or not, as the case may be, as the habitual narrative stands between them and a new certainty. Table 6:: Organisational Rituals and Cultural Change below shows some obstacles in the form of (Johnson, Scholes and Whittington 2008). The table shows an alignment of management styles in times of change with Stage One Variable ID in Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant below.

Ritual	Role	Peirce Triad ID
Rites of passage	Promote social roles and interaction	1; 9; 10; 13; 17; 18; 21; 27; 35.
Rites of enhancement	Motivation and recognition	6; 17; 22; 26; 29; 30; 36; 37; 40; 43; 44; 48.
Rites of renewal	Reassurance and empathy regarding issues	G1.3; G1.5; G1.9; G2.2; G2.4; G2.5; G2.7; G2.8; G3.3
Rites of integration	Sense of community of purpose through normative behaviour	3; 5; 9; 14; 16; 17; 19; 20; 27.
Rites of conflict reduction	Arbitration and negotiation	10; 15; 17; 18; 21; 27-35; 38.
Rites of degradation	Unfreezing the organisation and managing casualty triage	9; 13; 15; 21; 28; 36; 38; 43; 44.
Rites of sense making	Sharing and agreeing interpretation	1; 9; 10; 18; 20; 27; 43; 44.
Rites of challenge	Safety and security	26; 27; 29; 30; 36; 38; 39.
Rites of counter-challenge	Resistance and unauthorised discourse	2; 4; 7; 15; 17; 26; 27; 29; 31; 33; 34; 35; 38; 40.

Table 6:: Organisational Rituals and Cultural Change (Johnson, Scholes and Whittington 2008)

3.5.2 Force Field Analysis

Force field analysis (Covington 2012) is widely used in change management to help understand most change processes in organisations. In force field analysis, change is characterised as a state of imbalance between driving forces (e.g. new personnel, changing markets, new technology) and restraining forces (e.g. individuals' fear of failure, organisational inertia). However, a note from Jessop (2002) instructs us on the relationship of strategy and the changes it seek to invest in organisations. Jessop views a new strategy as a struggle between strategies and have a partly semiotic character rooted in discourses which project new visions through the development, dissemination and internalisation of strategies. For example, the success of the strategies and associated discourses Jessop refers to, depends upon the powers of dissemination and recontextualization of strategy artefacts, which semiotically includes powers with respect to genres of media and mediation such as those of narrative, as well as with respect to styles. And Fairclough (2003) recognises this when he states that with resistance to change possible even under benign circumstances, leaders must be even more skilful at handling the human side of change when the environment is turbulent and the impact of change revolutionary.

As a coping strategy Covington (2012) suggest that to achieve change towards a goal or vision three steps are required:

I. First, an organisation has to unfreeze the driving and restraining forces that hold it in a state of quasi-equilibrium.
II. Second, an imbalance is introduced to the forces to enable the change to take place. This can be achieved by increasing the drivers, reducing the restraints or both.

III. Third, once the change is complete the forces are brought back into quasi-equilibrium and refrozen.

Johnson, Scholes and Whittington (2008) view force field analysis in a diagnostic vein to identify problems that require attention during periods of organisational change. They argue that these strategy artefacts help to generate discussion as a means of intervention on existing storytelling and narrative across the management regime.

		ID
Pushing	Work ethic that delivers results Commitment of employees Flexibility and agility Know-how and competency Management support for change Staff support for change Desire to work in new ways Staff diversity Clear articulation of future state Ownership and accountability Access to skills base development	1-4; 6; 8; 9; 13; 16-22; 25; 26; 35; 37; 41-44; 45.
Resisting	Traditional structure and way of working Bureaucracy Departmental silos Workloads and work pressure Homogeneous workforce, lack of diversity Conservative, risk averse Blame culture Command and control top-down management Lack of ownership Deference to senior management No past experience	5; 7; 14; 15; 22; 27-34; 36; 38-40.

Table 7: Forcefield Analysis (Johnson, Scholes and Whittington 2008)

Thomas (1985) explained that although force field analysis has been used in various contexts it was rarely applied to strategy, he does suggest that force field analysis could provide new insights into the evaluation and implementation of strategies. Table 8: Forcefield Analysis above shows alignment of management styles in times of change with Stage One Variable ID in Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant below.

3.5.3 The Cultural Web

By describing the distinctive rituals, stories, symbols, power and organisational structures and control systems that can contribute to the organisation's world view one can more clearly

characterise an organisation's culture. (Johnson, Scholes and Whittington 2008) described a cultural web, identifying several elements that can be used to diagnose organisational culture.

Ritual	Definition	Example	ID
Symbols	Symbols are objects, events, acts or people that convey, maintain or create meaning over and above their functional purpose.	What status symbols are there? What does the language and jargon signify? What aspects of strategy are highlighted in publicity?	2; 3; 7-10; 15; 19; 21; 22; 27; 28; 38; 41.
Power Structures	Power structures. The most powerful groupings within an organisation are likely to be closely associated with the core assumptions and beliefs.	How is power distributed in the organisation? What are the core assumptions and beliefs of the leadership? How strongly held are these beliefs (idealist or pragmatist)? What are the main power blockages to change?	1; 9; 10; 13-15; 18; 21; 27; 30; 34-39.
Organisational Structure	Organisational structure is likely to reflect power and show important roles and relationships. Formal hierarchical, mechanistic structures may emphasise that strategy is the province of top managers and everyone else is 'working to orders'. Highly devolved structures may signify that collaboration is less important than competition and so on.	How mechanistic/organic are the structures? How flat/hierarchical are the structures? How formal/informal are the structures? Do structures encourage collaboration or competition? What type of power structures do they support?	1; 9; 10; 13; 14; 18; 20; 22; 27; 30.
Control Systems	Control systems, measurements and reward systems emphasise what is import-ant to monitor in the organisation.	What is most closely monitored/controlled? Is emphasis on reward or punishment? Are controls related to history or current strategies? Are there many/few controls?	8; 15; 21; 30; 31-34; 37-41.
Rituals and Routines	Routines are 'the way we do things around here' on a day-to-day basis. The rituals of organisational life are activities or events that emphasise, high-light or reinforce what is especially important in the culture.	What routines are emphasised? Which are embedded in history? What behaviours do routines encourage? What are the key rituals? What core beliefs do they reflect? What do training programmes reflect? How easy are routines/rituals to change?	1; 8; 10; 20-22; 25; 27; 30; 35; 43; 44.
Stories	Stories told by members of an organisation to each other, to outsiders, to new recruits, and so on, may act to embed the present in its organisational history and flag up notable events and personalities.	What image is associated with your organisation, looking at this from the separate viewpoints of clients/citizens and staff? What core beliefs do stories reflect? How pervasive are these beliefs (through levels)? Do stories relate to: Strengths or weaknesses? Success or failure? Conformity or mavericks? Who are the heroes and villains? What norms do the mavericks deviate from?	9; 13; 15; 17; 22; 27; 44.

Table 8: Organisational Rituals and Cultural Change (Johnson, Scholes and Whittington 2008)

The important aspect from the Cultural Web for strategic decision-making is that of coherence. The greater the level of coherence the greater the likely advantage to the organisation in competitive markets. Strong cultures are a potent source of competitive advantage because they are do difficult to imitate. On the other hand, norms can be trapped by their coherent cultures into routines that impair the development of new strategies and lead to terminal decline in the long run. Table 9: Organisational Rituals and Cultural Change above shows alignment of management styles in times of change with Stage One Variable ID in Table 15: Part One and Two

Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant below.

3.5.4 Four Schools Model

Whittington distinguishes four approaches by the outcomes of strategy and the processes by which strategy is made, either deliberate or emergent on the basis of 'What is strategy for' and 'How is strategy developed', (Johnson, Scholes and Whittington 2008).

School	Definition	ID
Classical	Strategy is planned, formulated and controlled by the top management and then communicated down the hierarchical structure of an organisation. Strategy implementation takes place on different hierarchical levels according to the pre-set parameters without questioning suitability and adequacy.	2; 3; 19; 20; 26; 30; 32; 33; 36; 38-40.
Evolutionary	The Evolutionary approach is based on the belief that the economic environment is continuously changing. This approach advocates the idea that an organisation's success is more dependent on the environment than on its managers.	4-7; 13; 19-22; 25-34; 35; 37; 41-44.
Systemic	Where strategy formation is a collective process, as a reflection of the corporate culture of an organisation. Though the Classical and the Systemic Approach agree on the long-term planning process they have a different perception on the outcomes of strategy. According to the Systemic approach strategies are developed in complex networks and are culturally defined.	1-3; 7-10; 13; 14; 19; 20; 26-28; 30; 32; 33; 34; 36; 38-40.
Processual	Work with the world as it is and tend to follow rules and routines already existing in the organisation and individuals in the organisation bring forward own objectives and their cognitive biases trying to embrace these in order to decide on the goals that they all agree on. In the processual approach strategy rather emphasises on internal development than external, building on the company's core competences.	4-7; 15-22; 25-29; 31; 34; 35; 41-44.

Table 9: Four Schools Strategy Model (Johnson, Scholes and Whittington 2008)

This researcher suggest that perhaps researchers should reject the idea that taking any position wholly implies bias, if bias is a function either of, the semiotic of that position; the resistance one may have to other positions; or the impact a position has on other positions and viewpoints taken. And Whittington asks, is it possible to determine position on the basis of an ability to understand storytelling and narrative in strategy through semiotics?

Typical surveys collect opinion on many individual statements but do not consider how people organise these views on the individual items into a meaningful narrative on the subject matter (Hogg and Vaughan 2017). In this sense typical surveys are 'reductionist', since they consider 'statements' in isolation, but in reality, the sum is greater than the parts. This can be seen as deductive and inductive in nature. Hogg and Vaughan (2017) relate that deductive reasoning works from the more general to the more specific. Sometimes this is informally called a "top-down" approach. Initial enquiry might begin with thinking up a theory about our topic of interest; this is then narrowed down into more specific hypotheses that can then be tested; scope it then

further reduced through a study of observations to address the hypotheses. This ultimately leads to an ability to test the hypotheses with specific data, a confirmation (or not) of original theories. Inductive reasoning works the other way, moving from specific observations to broader generalisations and theories. Informally, this is sometimes called this a "bottom up" approach. In inductive reasoning, research begins with specific observations and measures; to detect patterns and regularities; formulating some tentative hypotheses that can be explored; and finally end up developing some general conclusions or theories (Hogg and Vaughan 2017).

This dichotomy may rationalise top-down/bottom-up, however, most studies on strategy focus on the outputs of strategy and its impact. These outputs are just the symptoms of strategy and not necessarily the root cause of success or failure. The root cause lies in the interpretation of the inputs to strategy, these inputs are the artefacts and the symbols by which people interpret the strategy story and narrative in order to take a position. To understand the output from strategy I propose to gain further insights by studying the inputs to strategy at a semiotic level if actors are to understand the symbiotic concatenation of symbols in strategy conversation that may lead to success or failure.

3.6 Semiotics of Strategy Conversation

It may be contended that strategic development is conversational in nature, and that the nature of the conversation will have much impact on the nature of the story that emerges, independently of the knowledge, analysis, strategic models and organisational politics that contribute the component elements. This thesis will characterise an approach to strategy; as story based; and oppose it to strategy as decision based. Although semioticians have been actively working in the field of marketing since the 1960's, it is only recently that semiotic concepts and approaches have received international attention and recognition. Diffusion of semiotic research in marketing has been made difficult by cultural and linguistic barriers as well as by divergence of thought.

As previously discussed, in the field of semiotics there are two main schools of thought; those researchers who base their conceptual framework on Peirce; while others tend to refer to the sign

theory of Ferdinand de Saussure. While others may include Algirdas Julius Greimas who developed structural semiotics named generative semiotics, trying to shift the focus of the discipline from signs to systems of signification. His theories are based upon those of Saussure. Greimas introduced the semiotic square as a means of mapping the logical conjunctions and disjunctions relating key semantic features. Occupying a position within such as framework invests a sign with meaning. This structure can be used to highlight 'hidden' underlying phenomena. The semiotic square is a tool used in oppositional analyses, by increasing the number of analytical classes stemming from a given opposition from two polar opposites. The elementary structure of signification involves recognition of the existence of opposition and contradiction or in the case of this study, univocal and plurivocal strategy conversation. In this study, the focus is not so much on the actors of discourse, but what are the influences on why strategy conversation changes as the nature of the story is changed. Mapping the topography of strategy conversation on a semiotic square may prove instructive in providing a greater understanding of the effectiveness of signs on directing intervention on strategy conversation.

Consequently, the thesis does not proceed by looking for strategic purpose and process, but rather wishes to develop analysis of strategic change by developing a generalisation of strategy conversation through the semiotic square. Semiotics as the process by which things and events come to be recognised as signs, is of relevance to strategy scholars and practitioners. Many strategists now view strategy conversation in terms of exchange and relationships. These relationships entail physical, psychological and social meanings. The broad objective of semiotics in strategy conversation is to make explicit the conditions under which these meanings are produced and apprehended. The semiotic square has its roots in the 'signifier-signified' dichotomy introduced by Saussure to distinguish between the material object or ostensible representation of the sign ('signifier') and the mental concept to which it refers ('signified') as discussed at Figure 7: Semiotic Process after Saussure on page 56 above.

Roman Jakobson argued that ‘binarism is essential; without it the structure of language would be lost’ Jakobson 1973 cited in (Chandler 2007). Lyons agrees that ‘binary opposition is one of the

most important principles governing the structure of languages' Lyons 1977 cited in (Chandler 2007). Saussure, of course, emphasised the differences between signs rather than their similarities. Antonyms have a practical function compared with synonyms, that of sorting. It was Jakobson who proposed that linguistic units are bound together by a system of binary contradiction Jakobson (1976), cited in (Chandler 2007). It is these contradictions that are essential to the generation of meaning for example something termed light or dark; black or white; strong weak etc. It is an open question whether our tendency to think in opposites is determined by the prominence of oppositions in language or whether language merely reflects a universal human characteristic. The various conventionally linked terms with which actors are familiar within a culture might more appropriately be described as paired 'contrasts', since they are not always direct 'opposites' (although their use often involves polarisation) (Chandler 2007).

The semiotic square is composed of four terms, each corresponding to a position on the square. Position 1: (term S1); Position 2: (term S2); Position 3: (term not-S2); Position 4: (term not-S1); The first two terms form the basic opposition of the square, and the other two are obtained by negating each term of the opposition.

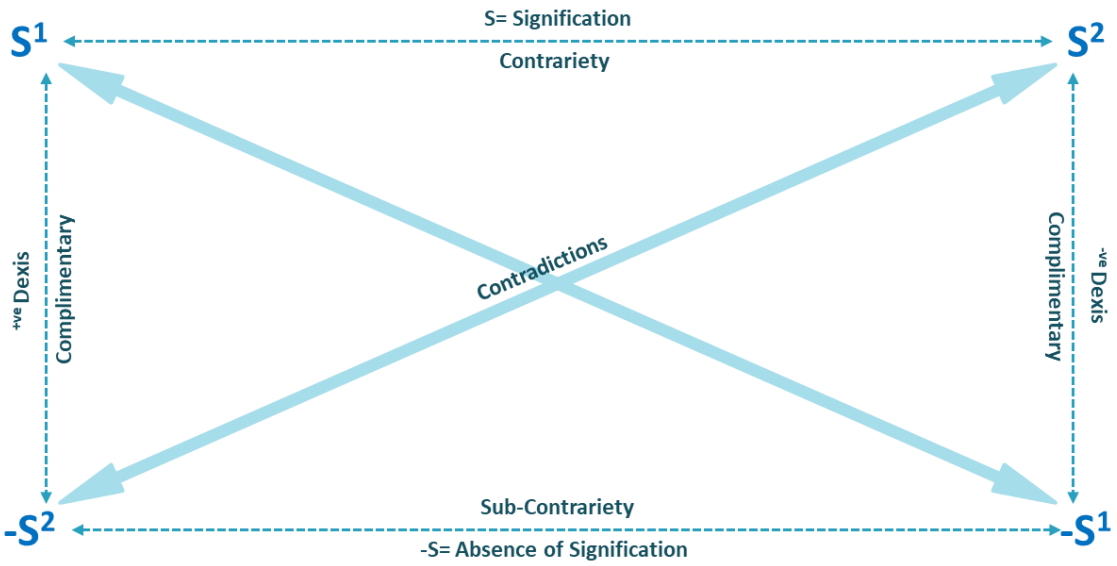


Figure 13: Semiotic Square after Greimas

The topography of the semiotic square shows that contrariety, contradiction and complementarity are bidirectional relations (that is, S1 is the opposite of S2 and vice versa),

whereas implication is unidirectional, from not-S2 to S1 and from not-S1 to S2. Because of the relation between them, terms S1 and S2 are called the "contraries" and terms not-S1 and not-S2 are the "sub contraries" (because they are contrary terms located "below" the contraries); terms S1 and not-S1 are the "contradictories", and terms S2 and not-S2 are "contradictories" as well.

Mapping the topography of strategy conversation on a semiotic square may prove instructive in providing a greater understanding of the effectiveness of signs on directing intervention on strategy conversation. In my early research into semiotics of strategy conversation, I modelled the binary components onto the semiotic square in terms of unanimity and partiality that are univocal and plurivocal conversations respectively (Robichaud, Giroux and Taylor 2004). This presupposition is logically connected, as the conversation is highly coded and organised. In in my earlier research it was felt that unanimity suggests a univocality that is holistic, indivisible, coordinated and cooperative (Sitz 2008); whereas, partiality is plurivocal in nature where there is bias, prejudice, and is singular, provincial, parochial and sectarian in nature (Boje 1995). It is the nature of this discourse between polar opposites, of certainty and ambiguity, which is of interest to this study. The balance between certainty and ambiguity determines the degree of adoption of strategy at an individual level within the organisation. In strategy conversation there is a growing body of research on the nature of univocal and plurivocal discourse as testified above (Robichaud, Giroux and Taylor 2004; Sitz 2008; Boje 1995). Univocal discourse is unequivocal, definitive and without metaphor. In strategy conversation, it signifies one voice and a unified view of strategy. Whereas plurivocal is deconstructive in nature and can signify equivocacy, ambiguity, and even logical inconsistency.

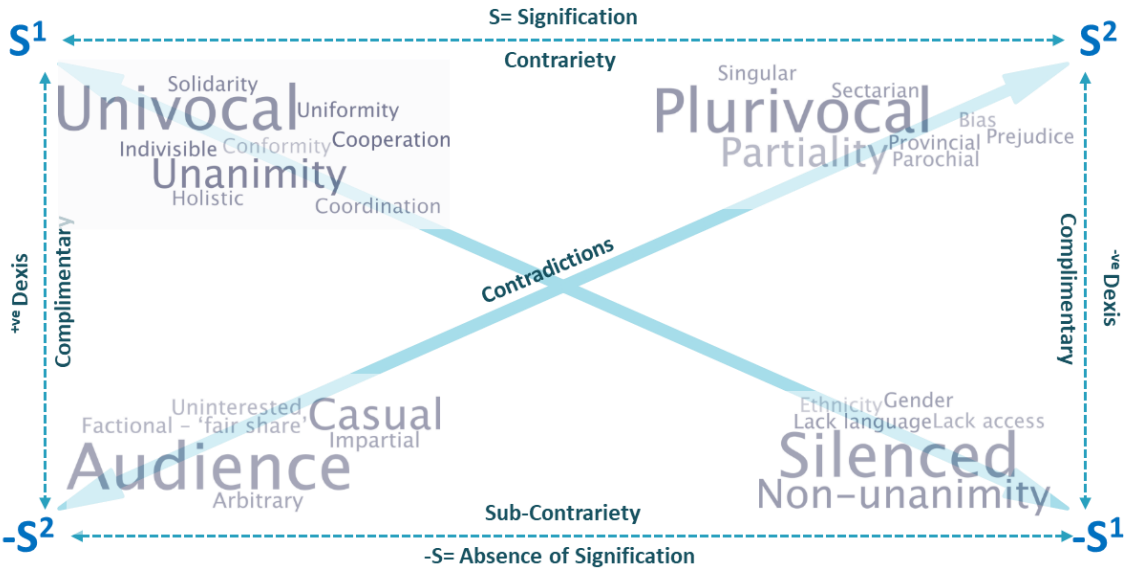


Figure 14: Semiotics of strategy conversation

It may be that semiotics, as a process by which things and events come to be recognised as signs, is of particular relevance to strategy scholars and practitioners. The majority of strategists now view strategy conversation in terms of exchange and relationships (Jastroch and Marlowe 2010). These relationships entail physical, psychological and social meanings (Easterby-Smith, Lyles and Tsang 2008). The broad objective of semiotics in strategy conversation is to make explicit the conditions under which these meanings are produced and apprehended.

Greimas introduced the semiotic square as a means of mapping the logical conjunctions and disjunctions relating key semantic features. Occupying a position within such as framework invests a sign with meaning. This structure can be used to highlight 'hidden' underlying phenomena (Chandler 2007). The elementary structure of signification involves recognition of the existence of opposition and contradiction, or in the case of this paper, univocal and plurivocal strategy conversation. Contradicting the binary components highlights terms that are logically incongruous. Such as non-partiality and non-unanimity and suggests the conversation is viewed by spectators or the silenced respectively. Spectators may be defined as casual, arbitrary and impartial; whereas, silence may be due to lack of language, gender/ethnicity, or even lack of access. The researcher feels that the semiotic square offers an opportunity to map the typography of the discourse landscape and better understand the univocal and plurivocal nature

of strategy conversation on knowledge management through storytelling and narrative. Contradicting the binary components highlights terms that are logically incongruous.

In relation to Case Study 3: Introduction of a Balanced Scorecard on page 250 below, prior to the adoption of the balanced scorecard at Ordnance Survey, the strategy conversation was plurivocal in nature. It may be seen that participants in this discourse were mainly driven by semiotics that were numeral in the pursuit of reward. The hard-numerical objectives were an easy focus for the dominant group in this management community. This focus was at the expense of softer objectives that lacked numeral definition. This lack of focus on softer objectives was having a debilitating effect on the achievement of key numeral objectives. The decision was made to redefine strategy discourse and introduce a more holistic view of performance in the system. To achieve this, the existing conversation had to be deconstructed and a new conversation formed where metonymy and metaphor were regarded as indispensable sign makers in this new strategy conversation.

Participation in the design of these signs was vital in gaining support of the wider community in accepting the signs within the balanced scorecard as realistic and achievable. Gradually a new univocality gained traction in the strategy conversation and a new univocal voice began to coalesce around the new semiotic, the balanced scorecard. This caucus grew as new signs were defined and then redefined and participant understanding of those signs gained a growing syntax.

3.7 Semiotics of Strategy

Having acknowledged the need for change and consequently the development of a strategy conversation masks the fact that there was a strong sense of habituation amongst the then strategy group, a world view, that was entrenched in some instances in a view of past success rather than the prospect of future opportunity.

3.7.1 What is recognisable in strategy?

This entrenched position points to a condition that some observers describe as an absence of strategy. Inkpen and Choudhury (1995) have a perspective that strategy is not always present,

either because conditions preclude its existence; the ideological framework for this condition do not exist; or wider environmental factors are extant with this absence. According to Inkpen and Choudary, in a transformative state while strategy may be considered absent it is emerging; until it does though there is no strategy. In an interpretative state, the articulation of transformative strategy suggests that there is a conversation that is tacit (Kogut and Zander 1992). While actors in this transformative state struggle to figure out what exactly is the scope of their ignorance and what they must do about it, they find themselves making decisions in a state of doubt. Peirce provides a useful framework for doubtful decision making (Keyhani 2011). Indeed, military strategists from Sun Tzu to Clausewitz have long spoken of the utility of surprise in catching the opponent off guard and causing "confusion and broken courage in the enemy's ranks", and according to Watts this points to doubt in the enemy command as a key advantage (Watts 1996).

Strategy artefacts may include mission, vision and value statements; organisational structures; and formal planning processes have a largely symbolic ceremonial role in an implied or explicit state. Meyer and Rowan (1977) believe that the semiotic interpretation of these conditions may inhibit autonomy and self-determination and constrain a desire to be agile and flexible in the face of change; free from the constraints of a costly strategic planning process and its attendant bureaucracy. Strategy made explicit can suffer the perception of codification and hardening expectations. Once expectations are so established, authors of strategy may seek confirming evidence and "tend to be awfully generous in what they accept as evidence that their expectations confirm" (Weick and Sutcliffe 2007) while at the same time they are inclined to ignore evidence of disconfirmation. Furthermore, plans often suffer from the fallacy of predetermination (Mintzberg 1979), and strategists assume that their assumptions will not be violated. However sound a plan may have been when it was devised, it may not be the best course of action now if circumstances have changed. Adherence to plans can leave little room for improvisation in unexpected situations therefore, plans can be "doubly blind" (Weick and Sutcliffe 2007) in that they not only restrict one's attention to the expected, but also limit one's response to the unexpected.

Doubting is the first step of strategy in a transformative state, but doubt is not easy to embrace (Keyhani 2011). In Peirce's words: "Doubt is an uneasy and dissatisfied state from which actors struggle to free us and pass into the state of belief; while the latter is a calm and satisfactory state which we do not wish to avoid, or to change to a belief in anything else. On the contrary, we cling tenaciously, not merely to believing, but to believing just what we do believe (Peirce 1931) ".

If the absence of strategy may be so defined it does not mean that a strategy narrative isn't taking place to try and resolve it. For the benefit of this research it is the transformative state of emerging strategy that researchers are primarily interested in, as it is in this state that storytelling and narrative may be considered most productive or indeed destructive in the formulation of strategy.

3.7.1.1 The Presence and Interpretation of Strategy

In contrast, strategy narrative is transmittable in formal systematic language and may include explicit facts, axiomatic propositions, and symbols (Kogut and Zander 1992). It can be codified or articulated in narrative, computer programs, training tools, and so on. These artefacts create the potential for individuals to share their observations and experiences (von Krogh, Roos and Slocum 1994) . Strategy storytelling and narrative is the product of formal and informal relationships between individuals and groups. This interpretative process requires an articulation and application of strategy artefacts, facilitated through face-to-face interaction and shared experience between the transmitter and receiver (von Krogh, Nonaka and Rechsteiner 2012). Inkpen (2000) also identified transparency or openness in the process of interpretation as critical for consensus in strategy. It is perhaps instructive at this stage to define interpretation in the context of semiotics in strategy langue. According to Peirce (Short 2007) interpretation requires the forming of signs of signs as a means of translation in an attempt to understand current external stimuli. The lack of consensus, as a result of the lack of transparency, may also be due to the absence of strategy described above by (Inkpen and Choudhury 1995). A quote often attributed to Napoleon is, that "the secret of war lies in the communications" (Dodge 1904), even so, this may not guarantee consensus. Successful interpretation of strategy requires consensus.

Clausewitz (von Ghyczy *et al.* 2001) recognised this lack of consensus leading to different interpretations as friction, as something that distinguishes real war from war on paper. Clausewitz went on to state that "the military machine may appear simple and easy to manage none of its components is of one piece and each part is composed of individuals, every one of whom retains their potential to exact friction as a force that theory can never quite define and makes every precise theory irrelevant". It was Boyd's appreciation (Watts 1996) of this connection between the interpretation of new information (in the face of uncertainty) and the application of poor interpretation (leading to disorder) that led him to connect Clausewitzian friction with the second law of thermodynamics. Moltke's widely quoted statement that "No campaign plan survives first contact with the enemy" (Moltke and Hughes 1993) is a classic reflection of Clausewitz's insistence on the roles of chance, friction, "fog," uncertainty, and interactivity (interpretation) in war.

As revealed by Rhodes and Brown (2005) telling a story is not just a passive rendering of events, it is a 'creative re-description of the world where hidden patterns and hitherto unexplored meanings can unfold. For Fisher (1989), "all forms of human communication can be seen fundamentally as stories, interpretations of aspects of the world occurring in time shaped by history, culture and character." A much deeper meaning to this kind of sensemaking can be found in Bruner (Rhodes and Brown 2005) that suggest that our versions of reality take narrative form, and that stories are means of interpreting events with meaning. That said, it is the need to understand 'interpreting events' that should lead to the need to understand the semiotic process of sensemaking in a social context.

3.7.1.2 Univocal and Plurivocal Narrative

Robichaud, Giroux and Taylor (2004) argue that language, spoken or written in texts, is the key to understanding how an organisation can be both a single entity and be made up of many different entities, and it is through an analysis of organisational discourse that a meta-conversation can be identified. Meta-conversation is presented as a bridge to opposing views that are seen at one and the same time, to be pluralistic and unitary; multivocal and univocal.

For example, in traditional strategy literature, an organisation can be presented as an entity that has a strategy, yet at the same time individuals in organisations may also speak for strategy, establishing positions for themselves. In this way, the notion of meta-conversation is complex in its analysis, again traversing micro and macro-level interactions. Within a meta-conversation, a strategy text can be seen as 'linking one conversational domain to another'. While this may not lead to the eradication of equivocation in sensemaking it may at least lead to understanding consensus within a univocal/plurivocal paradigm where consensus is the former and lack of consensus is the latter. This research argues that some attention to plurality may enable researchers to focus on how competing narrative interpretations in a social setting interact; while others become dominant and others marginalised Aaltio-Marjosola; and Boje in (Rhodes and Brown 2005); and thereby warn us to the degree of plurality in a strategy conversation.

3.7.2 How strategy privileges the signified

3.7.2.1 Social Semiotics

Strategy in the main is a socially situated construct that suggests rules, written or unwritten, are made by people, and can therefore be changed by people. To represent them as if they cannot be changed is to represent them as though they are laws of nature. However, not everybody can change the rules as to do so requires power. Without power actors in strategy are neither impotent or without influence, they have a choice; either accept the new rules or if they are broken consider what is the sanction? It is an effective way to describe how semiotics works in certain contexts, where explicit and detailed rules are enforced. But it cannot be applied to each situation, as social semiotics works with an inventory of the past, present and potential future semiotic resources, as well as an inventory of diverse types of rules, taken up in diverse ways in different contexts (Theo Van Leeuwen 2005).

The term 'semiotic resource' is therefore a key term in social semiotics. It originated in the work of Halliday in (Ruqaiya Hasan and Halliday 2014), who argued that the grammar of a language is not a code, nor a set of rules for producing correct sentences, but a 'resource for making meanings. Semiotic resources are the actions and artefacts actors use to communicate, they are

produced vocally; through body language; facial expressions; and gestures or by means of technologies. Traditionally they are called signs. Studying the semiotic potential of a given semiotic resource is to observe how that resource has been, is, and can be used for the purpose of communication; it is the drawing up of an inventory of past and present and possible future resources and their uses. By nature, such inventories are never complete, because they tend to be made for specific purposes dictated by the urgency at that time. According to Theo Van Leeuwen (2005) dimensions of semiotic analysis may include:

I. **Discourse** – the study of semiotic resources to reconstruct actual meaning.
II. **Genre** – the context of semiotic enquiry in terms of the style of the communicative form.
III. **Style** – the method by which actors use semiotic resources to establish their beliefs, norms and values.
IV. **Modality** – the convention adopted by actors in using semiotic resources to rationalise their adopted position.

Semiotic resources are the actions, materials and artefacts actors use for narrative purposes to determine possible changes in behaviour. Semiotic resources have a meaning making potential, based on their past uses, and a set of affordances based on their possible uses, and these may be actualised in social contexts where their use is subject to some form of semiotic regime. A key dimension of behaviour change is the relationship between descriptive and injunctive (Sood and Pulman-Jones 2010) social norms. Descriptive norms refer to the way actors behave and think; whereas injunctive norms refer to the rules extant to a given issue. A key objective of behaviour change management is to influence the descriptive norms so that they come close to the injunctive norms. Therefore, a semiotic approach to strategy may allow us to better understand how interpreters of strategy negotiate the space between injunctive and descriptive norms as they seek to take a position. This approach may allow us to develop our understanding of the way strategies bring injunctive and descriptive norms closer together and perhaps inform how challenges to strategies may be tackled and through this elucidate adoptive, adaptive and evasive features to actors' responses to difficult issues in strategy; and how they are ultimately referenced.

3.7.2.2 Narrative Privileging the Signified

Following the work of Foucault (1982); Kress (1984 and 1989); Kress and van Leeuwen, (2001); Fairclough, (1989 and 1993) in (Chandler 2007) , discourses are taken to be meaning-resources available in a society to make sense of the world, around us. The term 'discourse' functions in theory as a resource for constructing epistemological coherence in texts and other semiotic artefacts. Knowledge is produced in and shaped by the perspectives of societal rules. 'Discourse' names both the complex as well as the understandings derived in encounters with such knowledge. In these encounters actors in strategy produce what can then held as knowledge about their world. Discourse shapes and names the routes through which interpretation socially shaped their world view as one kind of knowledge; as actors in strategy encounter discourses in and via semiotic artefacts such as: buildings, texts, rituals may serve as examples of such semiotic objects.

Thus, semiotics is a theory of how actors produce, interpret and negotiate meaning of strategy through signs. A sign which the interpreter has signified gives us an insight into their 'stance' in the world, with respect to a specific part of the world, that part framed by the interest of the interpreter. As a general principle, actors may take all signs to be precisely that, an indication of the interest of the interpreter in their relation to the specific part of the world that is of interest to them. Signs are shaped by past experience and the urgency to adopt a position; and give us a sense of the criteria, the principles, the interest, which led to that representation. In doing that they give us an insight into the subjectivity of the interpreter. Where there is ambiguity there is doubt. The caliginous nature of the sign sets the intensity of the process of interpretation by the observer as they seek to reduce ambiguity and doubt; and acclimate to a new convention. In so doing, observers start to adopt a spatial relationship where world views approximate either in a univocal or plurivocal stance as mentioned earlier where interpretations of reality have no equivalence. This semiotic function of deconstructing and contesting the realities of signs will therefore reveal whose realities are privileged and those who are not (Chandler 2007) .

Strategy privileges the signified by the very nature of the rules of consensus extant at the time of its formulation. As environmental conditions change participants re-evaluate the currency of their position as new symbols and artefacts materialise, and others become redundant, to challenge the current agency of existing strategy in regard to their adopted position. This usually impels a need for change that may well challenge existing orthodoxy, as the semiotic process of interpretation seeks to resolve dissonance in a new paradigm (Watson 1971). It could be said that in this new state strategy privileges the signifier as strategy narrative seeks out different perspectives on troubling issues. This takes place through a complex process of negotiation where actors seek to interpret new symbols as actors seek to resolve or diffuse the contradictions of a position taken through existing and/or redundant symbols.

This process of negotiation was defined by Peirce as habit, the means by which actors 'connect' the symbol with the object (Chandler 2007). Peirce recognised this process as habituality where he has a notion of the degeneracy of signs (West and Anderson 2016) . This view has a Darwinian perspective as habits evolve through a process of natural selection in which primitive habits may be rejected and only those adopted that provide confirmation, safety and reduce risk from perceived threat as actors aspire to a final logical interpretant. Bergman's interpretation of Peircean logic (Bergman 2009) argues that the first logical interpretant is defined as conjecture; which establish a habit that enables imaginary experimentation; driven by various motives such as prejudice, bias, chauvinism and discrimination; leading to gradually refining a logical final interpretant. The final interpretant is an ideal and ideals can lose dominion if challenged by enquiry and/or new stimuli. This is habituation.

I would argue that strategy privileges the signifier as actors search for a first logical interpretant and that semiotic idealism modifies the position actors take when strategy begins to privilege the signified and actors negotiate a logical final interpretant. Strategy discourse in the community provides a way to seek out a resolution to our dissonance through experimentation (habituation) of different perspectives. When actors are close to exhausting the experiential process through

interpretation and rationalisation, actors move closer to taking a position. Such a position may become intractable even in the face of new challenges to our new and existing orthodoxy.

3.7.2.2.1 A Semiotic Interpretation - Kodak's Brush with Success

In Chapters 2 and 3 I discussed knowledge management through storytelling and narrative in the Chapter 2; and reflected upon storytelling and narrative in a semiotic context in Chapter 3. This draws a conclusion on the impact storytelling and narrative in a strategy discourse is in the main a linguistic construct and as such there is perhaps a need to turn to semiotics as a lens to illuminate the nature of this construct and perhaps discover the nature of how actors in strategy engaged in strategy discourse interpret the constituent artefacts in a strategy narrative. The story of how Eastman Kodak took a strategic view of a paradigm shift in photographic technology is illustrative of how those engaged in strategy discourse may interpret strategy artefacts that go on to have dramatic impact on an organisation.

In 1973 a young Brooklyn lad, Steven Sasson, went to work for Eastman Kodak as an engineer in one of its laboratories at its Rochester HQ in the USA (Estrin 2015). Very soon he was set to work on a project that would eventually lead to the invention of the digital camera. The concept of digital photography was not entirely alien to staff at Kodak. The problem Sasson had was trying to convince others of the huge potential of digital photography.

After a number of demonstrations to sales, marketing and senior executive staff "They were convinced that no one would ever want to look at their pictures on a television set. Print had been with us for over 100 years, no one was complaining about prints, they were very inexpensive, and so why would anyone want to look at their picture on a television set?".

Figure 15: "Super Jumbo" – the world's first Digital Camera from Kodak

In a semiotic sense, it may be argued that colleagues at Kodak understood the relationship between the Representamen and the Object; it would be difficult to imagine that they didn't; after all, they were employed by an industry leader in photography. The issue may lie in the Interpretant design and argument or reasoning trichotomy; where the interpretation of the Object would be indexical and symbolic. Indexical in the sense that the new technology signified potentially, huge change in Kodak's value chain; and Symbolic, perhaps, because it presented danger to the current world order of management and status within Kodak; sufficiently so as to endanger the prospect of the new product ever coming to market. Whatever the case, it's hard to deny that there was a very strong sense of habituation, a world view, that was entrenched in a view of past success rather than the prospect of future opportunity.

3.8 Chapter Summary

The relationship between narrative and semiotics is well documented. Readers of strategy have long known the importance of storytelling and narrative in the development of strategy. This discussion drew upon existing semiotic theory to explicate the durability of strategy as a story with a focus on the semiotic components of strategy to try and determine how actors in strategy take a position on the basis of their interpretation of strategy artefacts.

Chapter Three developed the philosophical position of social constructivism through the lens of semiotic theory; and the importance of semiotics, to storytelling and narrative in the context of social norms that regulates people's behaviour toward establishing a position in strategy and that

guide us into taking a position. I discussed the concept of social norms as socially rooted in a shared knowledge through strategy conversation and distinguished them from a more general concept of norms where norms may be universally valid and may have the meaning in terms of strategy artefacts. Chapter Four will build on this notion that to understand the nature of the strategy conversation and how actors take a position in regard to strategy then researchers need to understand the nature of semiotics as a method for understanding the dynamic nature of strategy direction.

4 CHAPTER FOUR – Semiotics as a Method for Strategy

4.1 Introduction

Chapter Three discussed social constructivism in strategy conversation through the lens of semiotic theory; in the context of social norms that regulates people's behaviour toward establishing a position in strategy; where norms may be universally valid and may have the meaning in terms of strategy artefacts. Chapter Four builds on this notion that to understand the nature of strategy conversation and how actors take a position on strategy, then researchers need to understand the nature of semiotics as a method for understanding the dynamic nature of strategy conversation. This chapter seeks to draw upon existing semiotic theory to explicate the durability of strategy. To do this requires a focus on the semiotic components; the artefacts; and the vocabulary; of strategy discourse to determine how actors in strategy take positions as a result of their interpretation of these artefacts. Some readers of strategy have flirted with the notion of semiotic theory in the field of strategy as practice, but the flirtation is fleeting and does not attempt to read strategy from a semiotic locus in depth. This hasn't stopped some readers from advocating that this is perhaps an area of future study. As previously discussed, (at 1.8 Significance of the Study) as far back as 2000 there was an appreciative research gap into the use of semiotics to diagnose strategy narrative (Evans and Easterby-Smith 2000; Easterby-Smith 1997; Easterby-Smith 1999). Nearly 10 years later not much seems to have change according to Sitz (2008) who proposed a 'semiotic' analysis from a hermeneutic perspective on discourse analysis. While Jastroch and Marlowe (2010) recognised the need to research changes in meanings attached to strategy discourse through a semiotic process. Since 2010 researchers working in the field of strategy discourse enumerate a number of instances where their own research came to recognise the need to define how consensus is reached on strategy and how durable is that consensus (Lukosch, Klebl and Buttler 2011); how some narratives are promoted or relegated and the links to sensemaking and power Weick, Sutcliffe and Obstfield (2005) cited in Balogun *et al* (2014); and finally a plea from Lehmann-Willenbrock *et al* (2017) for future research to explore

other enabling conditions during team interactions to what extent dispositional traits of actors in strategy can influence interaction patterns.

This chapter places discourse analysis in the context of strategy discourse as a means of managing knowledge to achieve strategic objectives. The discussion approaches the notion of how knowledge may be shared and the role of semiotics in that regard.

4.2 Semiotics in Strategy

We seek to establish a position on strategy for a wide variety of reasons such as environmental conditions extant at the time as reasoned by Clausewitz; the explicit nature of strategy argued by Inkpen (2000); and our interpretative process through the lens of past experience discussed by Van Leeuwen and Chandler. The purpose of this study is to determine what strategy artefacts are most important to actors in strategy taking a position and in so doing why they interpret in the way that they do. I believe that the application of semiotic theory may better answer what those artefacts are. In so doing researchers should be able to map actors' current position on strategy, thereby regulating a better understanding of the nature and extent of developing an intervention to improve implementation.

Strategy is the direction and scope of an organisation over the long term, which achieves advantage in a changing environment through its configuration of resources and competencies with the aim of fulfilling stakeholder expectations. Following 'the resource-based view' of strategy (Prahalad and Hamel 2009), strategy is about exploiting the skills and competencies of an organisation to provide advantage and/or yield new opportunities. Given this notion it may be argued that strategy in the main may be defined in terms of reasoning as abduction, in which the major premise is evident but the minor premise and therefore the conclusion only probable. Peirce termed this process as "abduction," followed by deductive and inductive steps that together take the strategist from doubt to belief. Abduction deals with that phase of inference in which doubt is most severe. It starts with inexplicability and ends only with provisional plausibility (Keyhani 2011) . Peirce was the first to suggest that this phase has a logic. It may be

that this logic can help us understand how organisational actors make decisions under doubtful circumstances. Basically, forming a conclusion from the information that is known.

Given the importance of strategy discourse, many scholars have studied the topic in various streams of literature. This thesis adds to this literature by bringing in a perspective from pragmatist philosophy. Peirce published a great deal of work on sign as a mediational means to understanding. It is the communication of that understanding through storytelling and narrative that form the basis of strategy, as in their absence strategy may exist but only in an inert form as in a vacuum. In an organisational setting, actors struggle to deal with strategy as they strive to resolve uncertainty through strategy discourse i.e. storytelling and narrative. It is the idea of discourse in strategy affecting the successful interpretation of strategy artefacts (or not) that is of interest to this study.

Strategy discourse is, therefore, essentially a communication system and logically must be affected by the storytelling and narrative within the organisation. The real problem in strategy discourse is one of interpretation of symbols and artefacts related to strategy. Artefacts are either being lost, or they are being reshaped with new meaning through abduction so that the understanding being transferred is incomplete. Communication can be seen as an energising force within the organisation enabling things to change. If some of this energy is lost the end result will change in the narrative exchange systems (von Ghyczy *et al.* 2001).

Readers of strategy have known for some time the importance of storytelling and narrative in the development, implementation and control of strategy. After all, what is strategy if it is not a story of intent. This interpretation suggests that interaction between actors within the business seems to change the meaning of strategies through the interpretive lens of Semiotics. It may be argued that strategic development is conversational in nature, and that the nature of the conversation will have an impact on the nature of the story that emerges, independently of the knowledge, analysis, strategic models and organisational politics that contribute the component elements. It may be argued that our approach to strategy is characterised as story based (Balogun *et al.* 2014) as opposed to strategy as decision based. Consequently, I do not proceed here by looking for

strategic purpose and process, but rather wish to develop an analysis of strategic change by developing a study of strategy conversation through the semiotics.

Uncertainty is inherent in strategy, because nobody can be sure about the future. The values and expectations of powerful actors in and around the organisation, or the beliefs and values of these stakeholders will influence strategy development of an organisation, depending on the power of each (Johnson, Scholes and Whittington 2008). This complexity means accepting that stakeholders in strategy make decisions which are as much to do with organisational politics, history and culture of the organisation; at a micro level as they are to do with the economics of strategy at a macro level, and that as a consequence strategy gets derailed before implementation. Complexity theory, drawn from the physical sciences, can be used to help manage the messy world of organisations. According to researchers such as Kathy Eisenhardt (Eisenhardt, Kahwajy and Bourgeois 1998; Eisenhardt 2008), complexity theory principles can be used to achieve order and progress in the social world just as stable patterns of behaviour and well-adapted species seem to emerge in the natural world.

4.2.1 The Vocabulary of Strategy

In order to understand strategy discourse, actors are compelled to understand the vocabulary used in that discourse. The vocabulary of strategy seeks to create a collective understanding within the strategy community and in ways that actors may make sense of strategy and communicate on that basis. Vocabulary may not be limited to just the written/spoken word. Whittington's strategy lens (Johnson, Scholes and Whittington 2008) also defines other signs and symbols such as brand, colour, sight and sound, which can say as much about strategy as the written word can. They may all be used through discourse to extend or limit the exercise of power. Folklore may also play significantly on strategy as cognitive bias is inevitable. The interpretation of events and issues in terms of prior experience is bound to occur. The idea that managers approach problems and issues of a strategic nature entirely dispassionately and objectively is unrealistic (Johnson, Scholes and Whittington 2008). The future is likely to be made sense of in terms of the past. Such interpretation and bias arise from experience of the past, not

least in terms of what is seen to have worked or given rise to problems in the past. This is one explanation of why strategies tend to develop incrementally from prior strategy. The very nature of strategy suggests change. According to Whittington the key features of strategic change include:

Time	How quickly is change needed?
Scope	How much change is required?
Preservation	What organisational resources and characteristics need to be maintained?
Diversity	How homogeneous are staff groups within the organisation?
Capability	What is the managerial and personal capability to implement change?
Capacity	What is the degree of change resource available?
Readiness	How ready for change is the workforce?
Power	What power does the change leader have to impose change?

Table 10: Key features of strategic change (Whittington 2010, p193)

According to Whittington path dependency relates to any form of behaviour that has its origins in the past and becomes entrenched. In an organisational and strategic context this is likely to take form over time in the development of behavioural routines supported by hardware and technology that make up systems of selling, marketing, recruiting, accounting, and so on. Such routines also often become more widely 'institutionalised' than the organisation. Path dependency is redolent of McKinsey's 7 S's (Dugas 2018) . The concept of path creation is, however, also relevant. The evolution of management style may not be in line with the needs of a changing environment but influenced and bound by the legacy of the past.

Technology	Legacy systems and data
Objects	Equipment, documents, buildings
Peoples	Day-to-day behaviour
Training and education	Access to and support for
Institutionalised standards	Rules, systems, language
Value systems	Suppliers, customers, political, external stakeholders

Figure 16: Path Dependency and Lock-in (McCabe 2010), p193

4.2.2 Narrative based Perspective

As revealed by Rhodes and Brown (2005) in their detailed review of narrative studies in organisations, interest in narrative as a way of understanding strategy can be found across a wide range of authors. In contrast to this view, Fisher's 'narrative paradigm' builds on the notion of human beings as storytellers that make sense of their world through narrative understanding.

The narrative paradigm does not treat rational argument as a mode of thought but subsumes it within a broad conception of communication involving the mobilisation of situational references to justify a position. For Fisher (1989) , 'all forms of human communication can be seen fundamentally as stories, as interpretations of aspects of the world occurring in time and shaped by history, culture and character.'

Strategy as practice has yet to develop the notion of 'meta-conversation' developed by Robichaud, Giroux and Taylor (2004) . For Robichaud et al, language, spoken or written in texts, is the key to understanding how an organisation can be both a single entity and be made up of many different elements, and it is through an analysis of organisational talk and text that a meta-conversation can be identified. Meta-conversation is presented as a way to bridge opposing views of organisation that are seen at one and the same time, to be 'pluralistic and unitary, multivocal and univocal. For example, in the traditional strategy literature, an organisation can be presented as an entity that has a strategy, yet at the same time individuals in organisations may also speak for strategy, establishing particular positions for themselves. In this way, the notion of meta-conversation is multi-level in its analysis, again traversing micro and macro-level influences in human interactions. Within a meta-conversation, a strategy text can be seen as a metatext 'linking one conversational domain to another' (Robichaud, Giroux and Taylor 2004) . It becomes a reference point or 'boundary object' (Star and Griesemer 1989) between different communities providing continuity and stability over time and space within a meta-conversation as different conversational worlds meet to construct strategy.

The strength of the notion of meta-conversation for a narrative understanding of strategy as practice may show how individual identities can come to be discursively incorporated as strategy. However, Fenton and Langley (2011) believe that empirically understanding this process requires more detailed analysis of how strategy practitioners are drawn together as a strategy collective while recognising their roles and distinctiveness. They conclude the following:

Agenda items: Focus and description	Appropriate methodologies (examples)	Selected precursors
1. Praxis:		
Examine how in vivo storytelling contributes to the construction of shared understandings about strategy, while taking into account the fragmented, partial, multi-level and continually 'becoming' nature of such storytelling.	Ethnography of multiple strategic episodes at multiple times to capture how stories build up, shift or disappear over time. Interviews to capture member sensemaking.	Boje (1991) Jameson (2001)
2. Practices:		
Examine the narrative plots and genres underlying institutionalised strategy discourse; Examine how, why and with what effects different macro-level narratives are translated or drawn on in particular contexts.	Discourse analysis of books and articles on popular techniques. Case studies to examine how and why institutionalised narrative genres are translated and adapted.	Jackson (1996) Jackson (2000) O'Connor (2002)
3. Practitioners:		
Examine how macro-level strategy narratives micro-level storytelling individual practice narratives constitute the subject positions and identities of strategy practitioners, influencing their modes of engagement in strategy praxis.	Narrative analysis of data from: Popular literature in strategy In situ storytelling (e.g., meetings) Biographical interviews to see how each identifies strategic actors, heroes, villains, helpers, etc.	Clark & Salman (1998) Whittle et al. (2009) Vaara (2002)
4. Texts:		
Examine the content of strategy texts to appreciate how narrative elements contribute to their persuasiveness and legitimacy; Examine how interactions among multiple practitioners and stakeholders around strategy texts influence the way they are written (e.g., in terms of the ambiguity, complexity and coherence of narratives); Examine how and why narratives within strategy texts are consumed by organisation members, influencing the organisation's trajectory.	Narrative analysis of strategy texts (e.g., strategic plans); Observations of interactions surrounding text production; Interviews with writers of strategy texts; Analysis of changes in narratives within texts; Interviews with people using strategy texts in organisations. Observations of texts in use.	Martens et al. (2007) Anderson (2004) Spee & Jarzabkowski (2009 Abdallah (2007)
5. Narrative infrastructure:		
Examine how a narrative infrastructure may emerge from the interaction and lamination of stories at multiple levels forming an overall thrust and direction for the organisation and channelling the activities of members.	Ethnography, observations, texts; correspondence, interviewing. Focus on channelling effects of storytelling and the persistence of narratives despite discrepancies.	Deuten & Rip (2000) Llewellyn (2001) Golant & Sillince (2007)
6. Meta-conversations:		
Examine how fragmented local identities are drawn together to construct collective organisational identities through continuing meta-conversations.	Ethnography of sequences of conversations or texts; Focus on how organisational identities are created through narratives that position other actors' roles in relation to them.	Robichaud et al. (2004)
7. Narrative diversity:		
Examine the diversity of individual narratives underlying collective ones.	Interviewing: comparison of practitioner narratives about organisational strategy and selves.	Boje (1995) Brown et al. (2008)

Table 11: Agenda for an integrative narrative-based perspective on strategy as practice (Fenton and Langley 2011)

4.2.3 Strategy as Practice

Strategy-as-practice researchers have built on sociological and psychological traditions to examine more closely the actual practice of managers in strategy, developing a detailed understanding of the activities and techniques involved. The promise of strategy-as-practice research is an enhanced capacity to design more practical strategy processes and improve the interpretation of skilled practitioners to diagnose root-cause of symptoms apparent in strategy discourse. With reference to Table 3 below, practices are defined by Johnson, Scholes and Whittington (2008) as "shared routines of behaviour, including traditions, norms and procedures for thinking, acting and

using “things”. Regarding strategy, they are forms of behaviour that have become routine within the organisation and acquired a degree of stability in an organisational setting.

Overall, this analysis suggests a need for narrative studies that attend to how storytelling may constitute knowledge transfer in strategy, providing strategists with resources to influence subsequent interactions (Taylor 2006). It would appear that this remains to be studied at a semiotic level. The research field of strategy as practice, may offer the notion of narrative infrastructure as two key inter-related ideas that could contribute to an integrative narrative framework and an overall thrust and direction may emerge as storytelling and narrative shapes strategy as stakeholders become actors in their own theatre. Additionally, they assert that written strategy texts can be central in mediating relations with micro- and macro-level storytelling and merits further narrative analysis. In addition, Johnson, Scholes and Whittington (2008), the way in which praxis, practices, practitioners and texts interact to generate a form of coherence is generally associated with the notion of strategy, is curiously absent from the initial framework enquiries.

4.3 A Semiotic Model

4.3.1 Analysing discourse

In the simplest sense discourse is conversation, or information. For Michel Foucault it is through discourse (through knowledge) that actors create knowledge. If it is true that actor’s knowledge is the sum of our experiences, then those in control of our early life experiences have enormous power. In an isolated family, a child's knowledge depends upon just a few people. In a sense, those few people create the child's identity. The child cannot know anything but what is communicated them by that small community (Foucault 1979). This can be no less true in a strategy setting where actors are ‘new’ to the context in which a strategy may be set, being influenced by longer serving incumbents. According to Foucault, discourse joins power and knowledge, and its power follows from our casual acceptance of the "reality with which we are presented". Discourse is created and perpetuated by those who have the power and means of communication. According to Foucault (1980) cited in Sebeok *et al.* (1987) those who are in

positions of power decide who the actors are in any discourse by deciding what actors discuss. Change in this regard may only occur when a new counter-discursive begins to receive wider attention. A discourse is never totally "pure;" it will always contain some measure of counter-discursive argument. Foucault persuasively explains how power works and why some people perform irrational acts, his narrative does have some drawbacks. Within Foucault's world view there is no absolute morality.

4.3.2 In search of Patterns, a semiotic approach

Patterns suggest the existence of order (Shah 2009), structure and even rhythm as a collection of random and unrelated phenomena, that may predicate the existence of an underlying meaning that might otherwise have remained hidden. The search for a more holistic view on strategy discourse in communities requires sense-making of these patterns in individuals and sub-cultures (Covington 2012), that may so characterise the nature of the complexity that exists in the strategy community. Semiotics concerns itself with finding patterns in seemingly disparate sets of information (Chandler 2017). Chandler goes on to relate that most research starts from an a priori assumption that respondents are in charge of their own belief systems. That they can explain their own behaviour; and can answer questions about the motivation behind their choices in discourse and narrative. Qualitative research (more than quantitative) understands that respondent answers may not fit within a totally rational framework (Alexander 2000). To this end, research depends upon the collection of anecdotal narrative to find out more about unconscious motivations. Whatever the individual moderator's approach, qualitative research makes two assumptions about its task:

I. that the respondents somehow hold the answer or suggest some certainty to the answer.
II. that respondents are free, self-determining agents.

Given these two assumptions, moderators are faced with further enquiry usually in the form of group interviews or in-depth interviews on a one-to-one basis in the search for the existence of holism (Chandler 2017). Semiotics challenges these assumptions as it seeks to inform the nature of strategy discourse that focusses on the underlying interpretation of strategy artefacts that are

information inputs. Semiotic theory speculates actors are not independently minded and self-determined as they might like to think that they are. Rather, actors are the schooled product of the cultures that they inhabit and that they draw upon the beliefs, norms and values and participate in group meaning in order to protect the perception of them by their peers.

4.3.3 Storytelling and Narrative and styles of discourse

Every culture or sub-culture expresses a degree of consensus through a shared worldview of its beliefs, norms and values (Miller 1990). This expression is a form of 'agreed' consensus of that culture's own world view drawn for a 'shared' interpretation of the strategy artefacts relevant to the strategy community at that particular moment in time (Alexander 2000). These artefacts may consist of any number modal aspects relating to the conveyance of artefacts within folklore, personal conversation and sub-groups all embodying similar cultural assumptions and meanings. But actors engage at different levels of understanding; in different times; reacting to different levels growing or receding concourse dependant on their own cognition of the type of engagement required by them at a particular moment in time in relation to the relevance of their own participation. Alexander (2000) goes onto state that most of us participate in several of these sub-cultural discourses, according to our need-states at the time and place. And during that time, and in that place, actors also put on an appropriate sub-cultural psyche, that facilitate the sharing of assumptions, attitudes and meanings of the actors temporarily engaged.

> "Every discourse is thus the 'voice' of the culture and/or sub-culture that created it; and as such, discourse becomes a rich and rewarding universe – a happy hunting ground – for semiotic analysis." (Alexander 2000 p, 139-146)

Styles of discourse change over time, as new paradigms become extant and gain the attention of actors engaged in the discourse change the cognitive framework shared by the members of the strategy group.

4.3.4 Discourse codes

According to Alexander (2000) communication codes, with their interpreted shared assumptions, are a form of cultural meaning assimilated via visual, verbal, aural or in any combination of

expressions of the discourse that represents shared values at any particular moment. To help track such developments, Ogilvie and Mizerski (2011) suggest it is necessary to classify the movement of discourse codes in some way; and because actors are looking at these code-changes over time, recommend using three simple classifications: residual, dominant and emergent. Ogilvie and Mizerski (2011) assert that every discourse, can be classified into its three-part balance between residual, dominant and emergent codes as all three codes are always present in all discourses.

I. **Residual** codes are leftovers from an earlier set of cultural values and usages from a past perspective. From a current perspective, residual codes are steadily weakening as their mode becomes redundant and either disappear altogether or get replaced by newer codes.
II. **Dominant** codes are the codes of the present day, and may be regarded as hegemonic either in a negotiated sense where the reader broadly believes the code but may negotiate or modify it in a preferred sense to reflect their own interests; or in an oppositional sense where the reader is place in an oppositional relationship to the dominant code and therefore reject it.
III. **Emergent** codes are not yet fully formed, they are signposts to the future read from a current perspective. As such, readers of emergent codes tend to morph and segue the meaning of the code according to the nature of the changing nature of the discourse and the need to reconcile the interpretation of the code with personal beliefs, norms and values. Emergent codes are of particular interest in qualitative research analysis.

These three code-areas show the way codes tend to simplify, and assume more of a 'shape' (clustered around what actors now see as the dominant codes at the time) as they move back in time towards residuality; codes gradually become hindsight (Alexander 2000).

4.3.5 Contexts

Using the simple 3-part code-classification system outlined above, the researcher should be able to broadly analyse the code changes in any discourse (Ogilvie and Mizerski 2011); and in this way cultural changes and paradigm shifts at a group and individual level may become more apparent in that discourse. Armed with this theoretical system, it should now be ready to try it out on some real-life discourses. If it were to be assumed that discourses are contexts, then perhaps actors in strategy may recognise and understand any object encountered by putting an immediate

sense of it into some kind of (pre-existing) contextual framework. This way actors give objects meaning for us; and can position new objects (or ideas, or concepts, or situations, or opinions) within our overall worldview.

Contexts provide us with this meaning-frame (Lawes 2002) . (When publicly criticised, for example, a politician often complains his comments were taken 'out of context'). We all contextualise most objects instantaneously. We recognise a Rolex within the context of all watches; an iMac within the context of all personal computers; a Jack Russell within the context of all dogs; and a dog within the context of all animals. But very few objects exist within a single context. Certainly, in the commercial world, brands and products exist within – or are connected to several contexts. And just as in strategy, interpretations of artefacts are focused or modified by all the contexts within which the artefacts remain relevant; as I shall try to illustrate in a strategy sense.

Every context is a sub-culture of its own. And although hidden it can be analysed via the visible discourse through which it expresses itself. However, because they are so varied and numerous, discourses can't be classified in accordance with a simple, all-embracing 3-part formula, like codes. For practical purposes all possible discourses influencing any brand need to be filtered down to a manageable number. In the context of famous marketing s, analysing for example, a bottle of Famous Grouse whisky (Alexander 2000). Which discourses would we identify as providing its main contextualising influences?

A few moments of thought reveal no shortage of candidates:

I. The Famous Grouse's own discourse is expressed via advertising, packaging, point of sale material; and brand persona.
II. This discourse is then set in the context of its main whisky competitors such as Bells, Teachers, Grants, etc. One might certainly also include the discourse of the growing malt whisky sector: Glenfiddich, Glenlivet, etc. Which in turn introduces a further discourse of 'gifts' and 'luxury'.
III. This is then set within a wider discourse regarding other spirits such as gin, vodka, brandy. This wider discourse has its own distinctive styles of language and communication.

IV. This listing of discourses could then be widened to include the whole alcoholic drinks sector discourse (wine, beer, etc in addition to spirits); and even the total beverages discourse including soft drinks, mineral water, tea and coffee.

V. Finally, there is the discourse of popular culture in its view of whisky and spirit-drinking in general.

Although beyond the scope of this research, but related to it, it may perhaps whet the appetite of any prospective semiotician to indicate something of these wider horizons. Discourse is the 'voice' of a culture or sub-culture (or context) made up from the total 'package' of communication it contains as such, discourse is also the vehicle for communicating the assumptions, taken-for-granted meanings, values and worldview that distinguish the 'people like us' of that culture from other cultures if we combine these two points with our original semiotic axiom that actors are all products of culture (i.e. created by our culture) this could therefore equally be expressed as the 'reader' is created by the discourse (Williams 2006). And this in turn could be re-expressed as, discourse creates its own readers. In other words, every communication within that discourse addresses itself – and relates itself – to the (imaginary) group of 'people like us' it believes (assumes) shares its cultural worldview. In semiotic terminology it expects a preferred position.

4.4 Chapter Summary

This chapter draws upon existing semiotic theory to explicate the durability of strategy as a story of intent; and discusses that this requires a focus on the semiotic components; the artefacts; and the vocabulary of strategy discourse to determine how actors in strategy take positions as a result of their interpretation of these artefacts. The assertion that this defines a significant gap in knowledge is attested by many readers of strategy who themselves flirted with the notion of semiotic theory in the field of strategy as practice, but the flirtation was fleeting and this hasn't stopped them from advocating that this is an area of future study. This chapter also places discourse analysis in the context of strategy conversation as a means of managing knowledge to achieve strategic objectives. The discussion approaches the notion of how knowledge may be shared; the role of semiotics in that regard; and what this means for those who embark on the strategy making journey.

Chapter Five seeks to present a philosophical assumption underpinning this research and introduce the research strategy and the empirical techniques applied. Initially, the chapter will reiterate the research aims and discuss the structure and scope of the methodology to achieve these research aims. The chapter will discuss the scope and limitations of the research design and attempt to situate the research amongst existing research traditions. Furthermore, the chapter will discuss a detailed outline of the research framework for this research study, discussing the parameters and scope of the methodology chosen, in achieving the research aims.

5 CHAPTER FIVE – Methodology

5.1 Introduction

Chapter Four builds on the notion that to understand the nature of strategy conversation and how actors take a position on strategy, I consider the notion that the application of semiotic analysis will provide a better understanding of the dynamic nature of strategy conversation and provide insight into how actors in strategy take a position in an active strategy discourse. The purpose of this chapter is to present the philosophical assumptions underpinning this research, as well as to introduce the research strategy and the empirical techniques applied. Initially, the chapter will reiterate the research aims and discuss the structure and scope of the methodology, in achieving these research aims. The chapter defines the scope and limitations of the research design and situates the research amongst existing research traditions. The overarching aim of this methodology is to draw upon existing semiotic theory to explicate the durability of strategy as a story of intent. To do this requires a focus on the semiotic components; the artefacts; and the vocabulary; of strategy discourse to determine how actors in strategy take positions as a result of their interpretation of these artefacts. Furthermore, the chapter will discuss a detailed outline of the research framework for this research study, discussing the parameters and scope of the methodology chosen, in achieving the research aims.

5.2 Methodological Focus

Relating to the discussion in Section 1.3 this research study initially focussed on knowledge management recounting the way knowledge is transferred between actors engaged in strategy discourse. Concomitant to the discussion in Section 1.3 the concourse analysed the nature of knowledge transfer as a key component of strategy discourse (Balogun *et al.* 2014; Brown and Thompson 2013) , in that it excites the way actors in strategy engage in the discourse to achieve particular ambitions. This study illuminates key strategy artefacts as constructs that can be measured, from a semiotic perspective, to help define how actors are engaging in strategy; their interpretation of these strategy constructs; and help to establish how actors may take a position on strategy discourse. The results will assist in defining a body of evidence that can be considered

as containing some utility in improving knowledge transfer in through a mediated strategy discourse.

5.3 Aims of Methodology

In view of the above, this research applies a mixed methodology. In this way, the purposes of the research overlap between exploratory and confirmatory research methods (Saunders, Lewis and Thornhill 2015; Collis and Hussey 2014). Confirmatory in the sense that this research seeks to understand the interpretation of artefacts in strategy that influence actors in taking a position using existing semiotic theory: and exploratory in the sense that this research attempts to elucidate why actors in strategy may take such a position and uncover the abductive reasoning (Peirce 1931; Atkin 2008) (also called abduction, abductive inference, or retroduction) of logical inference starting with an observational set of variables then seek to find the simplest and most likely explanation for taking a position as a means of management intervention; as a form of pragmatism, an approach that evaluates beliefs in terms of the success of their practical application.

Therefore, this study uses a Q-Sort methodology (Krivokapic-Skoko and O'neill 2011; Zabala, Sandbrook and Mukherjee 2018; Watts, S. and Stenner 2012), that may help establish a discovery of how actors in strategy take a position using existing semiotic theory based on Peirce and Greimas. This thesis will go on to discuss the rationale for this methodological approach; and discuss the context of current literature as a means to developing a Q-Set Concourse. And explore the possibility that the semiotics of strategy may elucidate a more instructive set of statements for the Q-Set Concourse. At this stage it may be instructive to remind the reader of the research question objectives with reference to Chapter One:

- RQ 1. Is a knowledge management perspective enough to diagnose the true nature of knowledge transfer through strategy discourse?
- RQ 2. What are the strategy artefacts that may so define strategy discourse?
- RQ 3. To what extent does strategy conversation, narrative, and discourse contribute to the position that participants in strategy may take?
- RQ 4. Can a semiotic perspective help to diagnose the position that actors, as key stakeholders in strategy, take on existing strategy?

RQ 5. Can the semiotic diagnosis of strategy discourse be a useful means of intervention in the nature and direction of the strategy narrative?

The use of Q Sort identified three key implications as research, practical and social. The research implication applies a positive demonstration of the effectiveness of Q Sort as a realist evaluation framework that determines the nature of the conversation in strategy discourse through factor analysis data extraction and the process of elimination. Realist evaluation is structured around the question of "What works, for whom and why" (Pawson and Tilley 1997). Substantial development of metrics, mechanisms and programme theory have done much to create legitimate methods for understanding what works and why, yet the "whom" element has not yet developed into a distinctive methodological style. In pursuing this line of thought is a recognition that there is little in realist social theory to illuminate an individual worldview, to use Pawson's term. The conduct of this study is more concerned with the "whom" aspect of "what works (or doesn't as the case may be), for whom and why". The practical implication of this research is the creation of a typology that would otherwise have remained hidden with complex data; that facilitates the gestation of an intervention to control the strategy narrative strengthened by the veracity of the research findings. Social implications are manifest in the factors that have been revealed by an enquiry of this nature. These factors can be seen to provide an equality in the share of voice within the strategy discourse without participants feeling the need that they need to compromise their position through overt and/or public annunciation.

5.3.1 Why Q Sort?

(Zabala, Sandbrook and Mukherjee 2018) argue that seeking to understand human perspectives is critical in a range of conservation contexts, such as overcoming conflicts or developing outcomes that are acceptable to key stakeholders; they further assert that Q Methodology is unique in that it is a semiquantitative technique widely recognised in social research as a means of exploring human perspectives in critical discourse analysis. (Hagan and Williams 2016) suggest that Q Methodology has been applied to 4 broad types of conservation goals such as addressing conflict; devising management alternatives; understanding policy acceptability; and critically reflecting on the values that influence discourse. They go onto state that through these applications,

researchers may determine hidden views that may so determine an intervention in strategy discourse. The Q Methodology has a clear procedure but is also flexible, allowing researchers explore and perhaps trach changes in long-term views.

However, (Hagan and Williams 2016) also relate, like many others, that the sampling of respondents is usually not random, and results from Q Methodology cannot be readily extrapolated to wider populations; and arguably leaves less freedom of interpretation than qualitative discourse analysis and interviews because perspectives in Q Methodology are limited to a set of artefacts presented to respondents and, to some extent, to the quantitative results.

Q Methodology can be combined with other methods, such as interviews (Rastogi *et al.* 2013) or surveys (Hagan and Williams 2016), but primarily it is often used as a standalone technique. In comparison with surveys, Q Methodology yields more nuanced and complex opinion (Kamal, Kocór and Grodzinska-Jurczak 2014). It offers a middle ground between the structure of surveys and the depth of interviews and combines the advantages of both. It is most frequently administered with individuals, and in such cases, it is relatively free of certain psychological biases such as dominance effect (Mukherjee *et al.* 2015), which can affect methods administered in groups (e.g., focus group discussions) (Rastogi *et al.* 2013). Q Methodology is primarily explorative (Hagan and Williams 2016) for qualitative recognition of the mere existence of subjective views instead of measurement of predefined attitudes or perceptions. Furthermore, Q Sort converts in-depth subjective information into quantifiable data in a way that traditional methods are not capable of.

Given that a quantitative approach requires a large sample to obtain general findings, a qualitative approach investigates a small population in depth(Bashatah 2016). In contrast, Q-methodology mixes both approaches by using a small sample of participants to determine complexity in strategy conversation (Stenner and Stainton Rogers 2004; Watts and Stenner 2005; Watts and Stenner 2012). In addition, Q-methodology may considered as a bridge between qualitative and quantitative research. It has the same level of mathematical rigor as quantitative

methodology, it provides for direct measure, and it has an interpretive component comparable to that of qualitative methodology.

Thus, the Q-sort should identify what the participants‟ perspectives give to the subject, not just their perspectives in general [6] but the social viewpoint (Watts and Stenner 2012). In addition, (Wint 2013) mentions that it is a suitable research approach for a sensitive topic, such as strategy development, where the participants could express their opinions based on their experience by sorting the Q-set, without embarrassment or ferar of sanction. It also strengthens the researcher–participant relationship; by giving the participants freedom to sort the Q-set, the researcher relinquishes power (Wint 2013). Moreover, as (Bashatah 2016) states, Q-methodology allows the researcher to collect numbers of shared viewpoints from different groups of participants, and after conducting the analysis, the researcher will find that each viewpoint is heard as an individual voice.

Some researchers have mentioned that the main disadvantages of Q Methodology are validity and reliability issues, which are important elements of any type of study (Watts and Stenner 2012). In studies using Q Methodology, validity and reliability can be implemented, but in different ways, such as by asking the same participant to sort the statements more than once or alternatively, validity and reliability sometimes emerge after the data analysis is completed, if similar factors arise (Watts and Stenner 2012). The strengths and limitations of this methodology depend on the context; in the study at hand, the context was the Senior Management Team currently implementing a new strategy paradigm. Q Methodology helps with exploring participants viewpoints on any new topic in a different way. This method is considered well organised and follows clearly defined and well refined protocols. The point of Q Methodology is to identify participant viewpoints, rather than how many hold this viewpoint. Furthermore, this method allows for revealing all the participant's voices and does not ignore any voice, as illustrated throughout the course of the analysis, by presenting the results in factors. Furthermore, in the Q sort process the data collection was very time-efficient and simpler, as a data collection exercise, than would have been possible through using traditional interview

techniques and all its attendant data sifting, correlation and analysis. Lastly, this method is just as effective whether the researcher is present or absent during the data collection Q sort.

5.4 Research strategy

Blaikie (2018) argues that research strategies are used in the context of a research paradigm that governs the considerations of the research methods that may be suitable enshrined in the research methodology of the enquiry at hand. The context of this paradigm is set out in Chapter One of this thesis. Blaikie further defines research strategy as the way in which researchers should seek to justify the original hypothesis of our phenomenological enquiry through the divination of the 'what, 'why' and 'how' to the research questions. He also recognises that it may be necessary to adopt different research strategies for different research questions, where inductive enquiry may be used to answer 'what' questions; and inductive and abductive enquiry used to answer 'why' questions. The abductive enquiry has the advantage of being able to answer both 'what' and 'why' questions. The cautionary note on adopting an abductive research strategy lies within the stance of the researcher that leads some researchers to suggest may compromise the research enterprise. While others argue that abductive research strategies do make a valid contribution to knowledge so long as the enquiry incorporates the social 'actor' point of view and acknowledges that any such view accepts the degree of relativity in both space and time (Blaikie 2018). It is in this vein that this research strategy draws upon existing literature in support of the stated hypothesis; research questions; and research methodology adopted in the research design.

For the purpose of clarity in this study therefore, an inductive strategy was primarily adopted to provide answers to 'what' enquiries in Part Two methodological tool to help establish the position that actors take on strategy. And an abductive strategy was adopted to provide answers to 'what' and 'why' enquiries in Part One with two clear research objectives in mind; firstly to elaborate on the positions actors took on strategy in Part Two; and secondly to provide possible means of intervention to the strategy narrative on the basis of the enquiry in Part One.

5.5 Research Design

5.5.1 Introduction

On the basis of 5.4 above, this research design adopted a two-stage approach to this research:

I. Part One: involves Q Methodology where the statements that enable the ordering of idiosyncratic viewpoints into groups are developed that will inform the structure and form of these groups comparable to the structure of a discourse in strategy.
II. Part Two: is essentially quantitative in nature that will aim to establish actors in strategy taking a position; and at the same time aid the design of the statements in the Q set using Q Methodology.

5.5.2 The Derivation of Elements and Research Instruments

The discussion on strategy as practice and discourse analysis in chapters two and three above respectively forms the foundations of artefacts in this study, in terms of determining the elements for use in this study, but from a Peircean semiotic perspective. Therefore, this literature review had two key purposes in this study, the derivation of artefacts to be used, which provides a framework on how strategy may be understood; and the formulation of an interpretative guide to the impact that the interpretation of these artefacts may have on strategy development.

5.5.3 Sampling

The primary interest of this study is to establish key dynamics in strategy and how these may influence the outcome of strategy. To that end the Senior Management Team at Solent University was identified as a possible locus for this research. This stakeholder group was involved in the development and implementation of a strategy in a large city-based University challenged my significant changes in the higher education market. The strategy had been agreed three years prior to this study and the senior management team was actively involved in the operationalising of this strategy. There were 18 people in this group that included the Vice-Chancellor; Head of Strategy Development; and the Heads of School from across the organisation.

This phenomenological study may be defined as cross sectional in design (Saunders, Lewis and Thornhill 2015), in that it is a snapshot in time of an ongoing and developing strategy narrative. The research objectives and the time constraints on both the researcher and individuals in the

stakeholder senior management group framed the context of the fieldwork in that at least half of the stakeholder group would be necessary to fulfil the research requirements using a Q Sort methodology, finally 10 respondents out of the 18 senior managers participated in this research. This sample size produced a sizable and valuable contribution to this research study across the strategy management field and is deemed to reflect the current nature of strategy discourse in the stakeholder group at the time of observation.

5.5.4 Piloting

Access to the strategy group was gained via the head of strategy. This was facilitated through a series of meetings that set out the nature and the scope of the research to help open up the stakeholder group to access by the researcher. Three senior managers participated in a pilot using Part One and Part Two research tools to determine the effectiveness and efficiency of an online method of gathering research data. Guidance notes were provided to help respondents navigate through the research tools with the minimum of interception by the researcher. The pilot also highlighted the need for any clarification and elaboration on the definition of the variables and their rationale in the context of the research objectives. Once the pilot stage was deemed as complete the research methodology was opened up to all the senior managers in the stakeholder group.

5.5.5 Data collection: Part One – Q Methodology

Q Methodology is considered particularly suitable for researching the range and diversity of subjective experiences, perspectives, and beliefs (Watts and Stenner 2012) . Q Methodology enables the ordering of idiosyncratic viewpoints into groups that are revealed to have the structure and form comparable to the structure of a discourse (Brown 1980). The transformation from statistical factor to discourse involves close analysis and interpretation of interview material alongside the statistical data. Q Methodology provides an approach for the systematic study of subjectivity (Brown 1996). It is more commonly used to reduce individual worldviews down to morphologically defined shared worldviews. This distillation is qualitative in nature supported by

quantitative data that facilitates factor analysis. It allows discourse to be rendered empirically evident and,

> "a means of capturing subjectivity – reliably, scientifically and experimentally…" Watts and Stenner (2012 p,44) .

Q Methodology provides an approach for the systematic study of subjectivity (Brown 1996). It was originally described by Stephenson in a letter to Nature in 1935 Watts and Stenner (2012) and as McKeown and Thomas (2013) put it, "The value of Q Methodology is that it enables entry into subjective worlds and provides the tools for making those subjective meanings objective". In its most common form, it allows complex individual viewpoints (beliefs, attitudes, opinions), to be reduced to a smaller number of shared perspectives or worldviews. The emphasis on understanding the viewpoint of the participant has a markedly qualitative aspect, but the use of factor analysis to identify the shared perspectives statistically obviously adds a quantitative component. Q Methodology brings qualitative research into the quantitative domain (McKeown and Thomas 2013) and as such it is perhaps best described as "qualiquantological" (Stenner and Stainton Rogers 2004). In this respect it has a somewhat unique approach which allows:

> "… knowledge structures to be rendered empirically observable" and provides "a means of capturing subjectivity – reliably, scientifically and experimentally…" Watts and Stenner (2012 p,46).

The key stages in the process are set out in Table 12: Q Methodology process below:

Stage	Definition
Establish the concourse	The full range of opinions on the subject matter at hand needs to be considered.
Generate the Q-set	A representative sample of items (usually statements, although objects or images can be used) is selected from the concourse. Around 50 items are typical.
Select the P-Set	This refers to the selection of participants, which in the case of evaluation is likely to be stakeholders, obviously including individuals that the programme is intended to benefit.
Administer the Q-Sort	The Q-sort is the mode of data collection. Participants are given the statements selected in stage 2 and are asked to rank their viewpoint on each statement in relation to a particular instruction (known in Q as the condition of instruction).
Analysis	Analysis consists of correlating the individual Q-sorts to identify shared perspectives. Factor analysis (Q-Analysis: by-person, not by-item)
Interpretation	The goal of interpretation is to describe the shared viewpoint or worldview modelled by each of the factors. This involves articulating the perspectives based on the composite Q-sort for each of the factors identified. Yielding a set of factors whose interpretation reveals a set of points-of-view (F-set)
Evaluation	Having identified and interpreted a typology of statistically valid worldviews, and reviewing how behaviour or worldview has changed, it is now possible to review all the available evidence to ask what works, for whom and why. If other aspects of the evaluation have gone well, the method may even generate some useful answers.

Table 12: Q Methodology process (Watts, Simon and Stenner 2005)

Q Methodology has a wide and varied application in psychology, political science, and marketing. Examples of its use include product development and advertising; identifying and communicating the perception of risk; and comparing perspectives towards different industries. It has also been used to engage with those on opposing sides of contentious issues, determine viewpoints, identify areas of consensus and divergence, and negotiate conflict. This form of enquiry can be seen to create shared guiding principles, managing conflict, understanding non-participation, identifying areas of consensus, (Eden, Donaldson and Walker 2005).

5.5.5.1 Establish the Concourse: Condition of Instruction

The full range of opinions on the subject matter at hand needs to be considered. In Q Methodology the term concourse is used to refer to the totality of communication on a topic. Although this may be informed by traditional academic sources it will generally reflect the natural communication of the likely participants. What is sought is the range of opinions that might find themselves in a participant's worldview. The research question plays a very important part in any Q Methodology study. It dictates the nature and structure of the Q-Set generated. It also acts as a 'condition of instruction' (Watts and Stenner 2005) for the participants and guides the sorting process. The research question, aims and objective dictated the nature and the structure of the Q-Set (Watts and Stenner 2005). The proposed Q-Set for this project is based upon artefacts that

relate to storytelling and narrative in the development of strategy. It is intentional that the construct of the statement was generic, based upon the ubiquity of the symbols and artefacts in strategy discourse. The theory that drives the construction of these statements is firmly rooted in the research question at 5.3 on page 103 above aligned to Peircean triadic semiotic theory set out below.

Condition of Instruction Statement: **To what extent do you agree with the following statements in regard to the current Solent University Strategy?**

5.5.5.2 Generate the Q Set

The Concourse defines the entirety of the locus of debate that is identified by a series of statements that populate a grid arrangement in relation to that definition. All the variables should measure the construct in the same direction. These statements form the Q-set that needs to be an assembly of unambiguous statements that respondents place on the grid according to their worldview. The drafting of these statements is subject only to the locus of current debate in strategy as practice and discourse analysis previously discussed in chapters two and three respectively above.

In preparation for the Q-Sort the researcher had to Establish the Concourse that encapsulated a range of artefacts that represented the scope of strategy discourse set out in chapters two and three of this theses. Key stakeholders in the senior management team were then asked to sort these on the basis of how much they agree (5) or disagree (-5) with each statement (please see Figure 17: Q-Set Concourse below). The narrative in each of the statements was derived from the intentions of chapters two and three, to both ground the views of the researcher in academic literature and also to identify other possible elements that might inform a participant's subjective reasoning or their emotions.

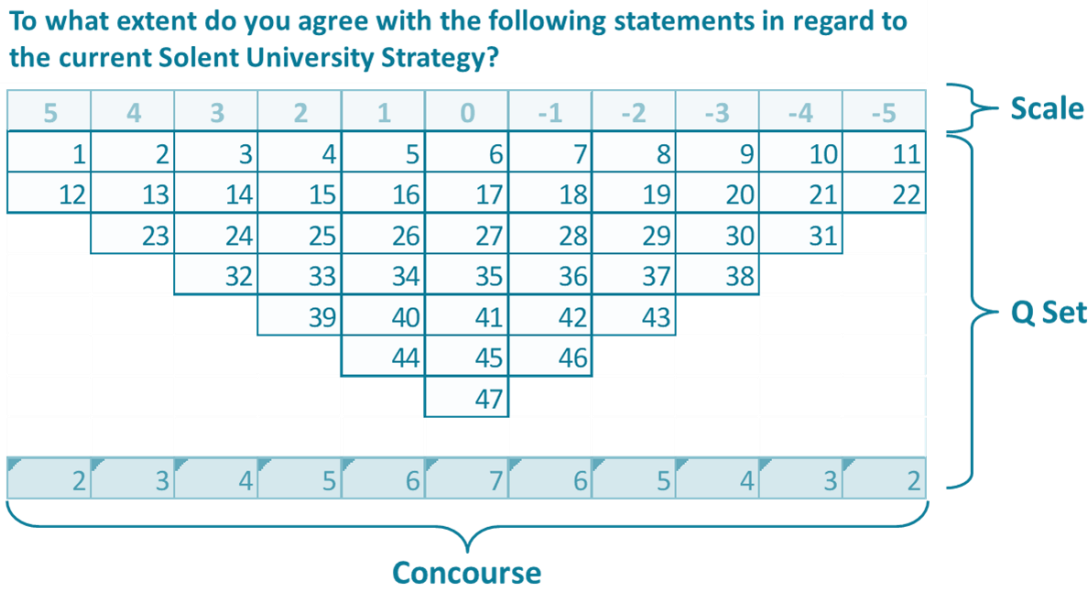


Figure 17: *Q-Set Concourse*

The literature review presents statements derived from cited sources enough for the purposes of achieving the research objectives. Referenced sources for each of the statements defining the rationale for the artefacts used in the Q Set are cited in a technical annex at Annex 2: Variables (Strategy Artefacts) in page 229 below. The statements do not carry any truth claim, and therefore the normal systematic and critical imperatives of a scholarly review do not apply in the creation of statements. It is the positioning of all such statements by the participant that enables the evaluator to suggest truth claims about the efficacy of a programme and thus each statement must capture something that might be part of the viewpoint of a respondent and does not have to be true by any external criteria of correspondence or veracity.

The statements used in the Q-sort, set out in Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; Table 17: Part One and Two Variables aligned to the Interpretant below, are representative of the subject matter of concern and careful selection can promote theory testing by structuring hypothetical considerations into the sample (McKeown and Thomas 2013). It is important to recognise that participants were required to rank the statements relative to one another. In this way viewpoints were modelled through the operational medium of the Q-Sort (McKeown and Thomas 2013). Stephenson developed the Q- Sort to enable factor analysis to be conducted on the data by-

person. The resultant factors that emerge were therefore categories of operant subjectivity (Stephenson 1977). This allows the gestalt or holistic nature of the viewpoint to be retained, in contrast to the traditional atomistic use of factor analysis (by variable or item) (Watts and Stenner, 2012) . Hence it is possible to identify the range and nature of truly independent worldviews that are embedded in and are often difficult to distinguish within complex discourses (McKeown and Thomas 2013).

Crafting a statement in this fashion has its limitations, by using theoretical perspectives as our starting point, the study ran the risk of missing additional dimensions of the perceptions of stakeholders in the strategy group. To partly obviate this effect and to ensure the compatibility of the statements with stakeholder's experience, the researcher conducted a pilot study (Nederhand *et al.* 2019). Statement selection depends heavily on subjective and reflexive judgements although piloting with the stakeholder group can help to obviate ambiguity. Given the complexities of language some ambiguity is inevitable. It is perhaps a merit of Q Methodology that because it accepts viewpoints as complex and multiple, that these statements are still usable whereas in a questionnaire they would have to be discouraged (Eden, Donaldson and Walker 2005). Therefore, the statements used in the Q-Sort should be representative of the subject matter of concern and careful selection can promote theory testing by structuring hypothetical considerations into the sample (McKeown and Thomas 2013).

5.5.5.3 Select the P Set

The P Set relates to the number of participants in relation to the focus of this research. By definition, they are strategy actors who have an interesting and relevant viewpoint on the current nature of strategy discourse. The respondent base is not a random sample; they must be actors uniquely identified with strategy discourse in a community of interest. Only a limited diversity of independent viewpoints exists on any topic (Brown 1980) and as such any well-structured Q Methodological sample, containing the wide range of existing opinions on the topic. Due to the nature of the nature of the P Set in terms of size, extrapolation and generalisation should only be exercised in the form of concepts, categories, theoretical propositions and modes of practice

(Watts and Stenner 2012). Large numbers of participants are not necessary since only a limited number of distinct viewpoints exist on any topic. The selection of participants need not necessarily be random, but strategically targeted to capture the likely range of differing viewpoints.

In sociology and statistical research Snowball sampling (also known as chain-referral sampling) is a non-probability (non-random) sampling technique that can be used by researchers to identify potential respondents in studies where they are hard to locate. Researchers use this sampling method if the sample for the study is very rare or is limited to a very small subgroup of the population. This type of sampling technique works like chain referral. And to a certain extent the researcher accepts that this may be the case but without detriment to the validity of the data collected. Watts and Stenner (2005) find that a smaller number of participants can ensure that pattern and consistency are still detected within the data. Using a large number of participants ‘‘can easily negate subtle nuances’’ and complexities characterising the very qualities that the Q Methodology aims to identify. In a questionnaire-based survey the ‘sample’ would be selected from the prospective respondent base. Whereas, in Q Methodology participants are chosen on the basis of comprehensive viewpoints and diversity rather than on the basis of representativeness and quantity. Many practitioners agree that perfectly valid results can be obtained from very small numbers of participants where respondents are usually selected along more qualitative lines (Eden, Donaldson and Walker 2005) .

5.5.5.4 Administer the Q Sort

At the heart of Q Methodology is the Q-sort, which is the means by which data is collected. Participants are given a set of statements regarding the matter under investigation and are asked to rank all of the statements relative to one another. This is facilitated by asking participants to place the statements on a triangular grid, typically on the basis of how much they agree or disagree with each of the statements. The completed Q-sort therefore represents the worldview of the individual on the topic of concern. This Q-Sort therefore models their subjective viewpoint (subjectivity) from a first-person perspective in a holistic fashion.

The Q-Sort is the mode of data collection. Participants were given the statements and asked to rank their viewpoint on each statement in relation to the condition of instruction on page 111 above. Conventionally, statements are placed on a triangular grid (quasi-normal distribution) requiring more extreme opinions to be expressed on a small number of the statements. Brief interviews were encouraged following the sorting procedure, particularly to explore the choice of items placed at the extremes. Ten participants, in the Senior Management Team, completed the Q-Sort that entailed sorting 47 statements. The Q Sort procedure was conducted online using QSortWare (Pruneddu 2018) . The respondent Guidance notes are set out in Annex 2.

5.5.5.5 Analysis

5.5.5.5.1 Introduction

Q Methodology combines qualitative and quantitative techniques to study 'subjectivity' using factor analysis techniques. Factor analysis is used to identify patterns of similarity between different card-sorts from respondents. Factors are represented by a distinctive ranking of the original statement set on idealised personal Q Sorts; this represents how a respondent with a correlation coefficient of 1 with a particular factor would have rank-ordered the statements. These idealised Q Sorts are used as the basis of interpretation from which a narrative of each factor is produced (McHugh *et al.* 2019). And McHugh relates that interpretation focusses closely on these idealised Q Sorts and the relative placement of all statements for each factor. Particular attention was given to characterising, distinguishing and consensus statements in refining interpretations. For each factor, qualitative data from Q Sorts was used to understand respondents' views, the rationales and reasons behind their Q Sorts and their interpretation of the statements.

5.5.5.5.2 Factor Analysis

Factor analysis and principal components analysis are method use by researchers to present complex relationships along normal distribution or scale orientated variables in a simpler way. Factor analysis also helps to assess the validity of a construct within a dataset regarding a measure attempting to quantify certain constructs.

The aim of factor analysis is to facilitate data interpretation (NCSS 2019). The researcher hopes to identify each factor as representing a specific theoretical construct. Data extraction routines, tabulations and charts from factor analysis are designed to aid the interpretation of the factors. The process id reductionist in practice in order to reduce the number of variables relevant to the enquiry. Factor Analysis is an exploratory technique applied to a set of observed variables that seeks to find underlying factors from which further observable variables may be generated. The underlying, influential variables are the factors. Factor analysis is carried out on the correlation matrix of the observed variables and each factor is the weighted average of the original variables. The researcher seeks to find a few factors from which the original correlation matrix may be generated. One of the most subtle tasks in factor analysis is determining the appropriate number of factors.

Extractions containing a concourse with two factors, may be rotated to form a new observation that does just as good a job at reproducing the correlation matrix. Hence, one of the biggest complaints of factor analysis is that the solution is not unique. Two researchers can find two different sets of factors that are interpreted quite differently yet fit the original data equally well (Streiner and Norman 2008). A factor in this context (its meaning is different to that found in Analysis of Variance) is equivalent to what is known as a Latent variable which is also called a construct.

- construct = latent variable = factor

Streiner and Norman (2008) also suggest that a latent variable is a variable that cannot be measured directly but is measured indirectly through several observable variables. Analysis consists of correlating the individual Q Sorts to identify shared perspectives. By-person factor analysis is used to identify subgroups that are statistically distinct from one another. Each factor represents a composite Q Sort, based on a weighted average of the Q Sorts of participants that share that worldview.

5.5.5.5.3 Rotation

Factor analysis defines coordinates in a subspace of the space defined by the set of adopted variables (Johnson, Halverson and Solomon 2009). These coordinates represented axes that are orthogonal in their relationship.

This orthogonal construct represents a position in three-dimensional space where each variable represents one axis. The analyse of three variables that are represented in three-dimensional space. Each variable becomes one axis. If it were supposed that data lies near a two-dimensional plane within the three dimensions, a factor analysis of data should uncover two factors that would account for the two dimensions. Further analysis may rotate the axes of this two-dimensional plane while keeping the 90-degree angle between them and rotate and yet maintain the same angles among themselves. The hope is that rotating the axes will improve the ability to interpret the "meaning" of each factor.

Varimax rotation is a common orthogonal rotation technique (Streiner and Norman 2008). In this technique, the axes are rotated to maximise the sum of the variances of the squared loadings within each column of the loading's tabulation. Following this routine, it is hoped that factor rotation may realise new factors that are highly correlated with only a few of the original variables. This form of reduction eases the interpretation of the factor to a consideration of two or three variables in that it clusters the variables into groups; each "group" is actually a new factor.

5.5.5.5.4 Choosing Factors

A number of methods have been adopted to determine the number of factors that should be retained for further investigation. However, Crafford and Smallwood (2007), the nature and complexity of the enquiry may require the researcher adopt the use of certain outliers and other linear dependencies that have relatively lower eigenvalues that may be associated with those with a stronger factor loading. Eigenvalues are scalars associated with a given linear transformation of a vector space where the sum of squared factor loadings for each factor; the percentage of total variance accounted for by each factor is equal to the eigenvalue divided by

the number of variates in the matrix. While Kaiser (1960) proposes dropping factors whose eigenvalues are less than one since these provide less information than is provided by a single variable; Jolliffe (1972) feels that Kaiser's criterion is too large. Jolliffe suggests using a cut-off on the eigenvalues of 0.7 when correlation matrices are analysed. Other researchers note that if the largest eigenvalue is close to one, then holding to a cut-off of one may cause useful factors to be dropped. Cattell (1966) documented the scree graph, which will be described later in this chapter. Although reading the scree graph may be regarded as subjective, studying this chart is a common method for determining the number of factors required for interpretation. Another benchmark is to pre-set a certain percentage of the variation that must be accounted for and then keep enough factors so that this variation is achieved (Crafford and Smallwood 2007).

The starting point for all factor analysis techniques is the correlation matrix. All factor analysis techniques try to clump subgroups of variables together based upon their correlations and provide analysts with insights into what the factors are going to be just by looking at the correlation matrix and spotting clusters of high correlations between groups of variables. Streiner and Norman (2008) quote Tabachnick and Fidell (2001) saying that if there are few correlations above 0.3 it is a waste of time carrying on with the analysis, clearly, researchers do not have that problem.

5.5.5.5.5 Identifying the Story

Factor rotation is then used to try to align clusters of individuals to a factor. Each factor or viewpoint can then be interpreted with reference to the 'shared' Q Sort generated by the analysis. Interpretation involves describing each of the viewpoints (factors) on the basis of the positions of the statements for each factor. The holistic first-person nature of the viewpoints is therefore preserved. The results of a Q study therefore depend on the researchers' decisions about how to rotate factors and which factors to retain (initially the software will generate many). This brings the researcher's subjectivity into the heart of the seemingly most quantitative stage of Q; indeed, the literature emphasises the potential for the theoretical selection of factors over the statistical (Stephenson 1977; McKeown and Thomas 2013). However, executed, what the factor

analysis provides is a way of grouping individuals by viewpoint, based on their correlations to particular factors. Q Sorts that correlate highly with a particular factor are designated as 'defining' that factor (Eden, Donaldson and Walker 2005) .

The next step was to compare all of the individual Q Sorts (viewpoints) to identify clusters of individuals who have similar Q Sorts and generate a shared Q Sort for each of the groups. This was done by correlating all the Q Sorts and conducting factor analysis to distinguish the viewpoints. Each factor or viewpoint can then be interpreted with reference to the 'shared' (average) Q Sort generated by the analysis. Interpretation involves describing each of the viewpoints (factors) on the basis of the positions of the statements for each factor. The holistic first-person nature of the viewpoints is therefore preserved.

The resulting factors therefore represent the shared worldview between clusters of participants. As such, the analysis was a data reduction process allowing a smaller number of shared perspectives, which are distinct from each other, to be identified. Statistically, factors are portions of commonality across participants in the study; factor extraction highlights these portions from the entirety of relationships in the study. One may think of factors as hypothetical viewpoints in the study. The process of labelling factors was facilitated by considering each factor in terms of 'What?' and 'Why?'; and 'How?' interpretation of the factor may be rendered.

A Question of What and Why?	A Question of How?
Consider your purposes in analysing the text	How does the variables align to personal value.
How does the sign vehicle you are examining relate to the type-token distinction?	How do strategy artefacts influence interpretation.
What are the important signifiers and what do they signify?	How are artefacts interpreted within the system.
Modality	To what extent are artefacts used to make judgements.
Paradigmatic analysis	To what extent does the artefact contribute to the absence of strategy.
What is the syntagmatic structure of the text?	If the signifier privileges the signified how does that contribute to the final logical interpretant.
Rhetorical tropes	The strength of memes and tropes to condition interpretation.
Intertextuality	What actors and/or artefacts influence interpretation.
What semiotic codes are used?	To what degree Is the interpretation of artefacts open or closed.
Social semiotics	Whose realities are having the greatest impact on strategy discourse.
Benefits of semiotic analysis	How can a semiotic construct intervene in the durability of strategy.

Table 13: Identifying the Story in Terms of What? Why? and How?

5.5.5.6 Interpretation

Q Methodology employs a by-person correlation and factor analytic procedure (Watts and Stenner 2005) and it is the overall configurations produced by the participants that are intercorrelated and factor analysed. The initial correlation matrix duly reflects the relationship of each (Q Sort) configuration with every other (Q Sort) configuration. This helps discrete worldviews to be statistically identified as distinct groups with a shared worldview. This type of semiotic analysis should educate the nature and the type of intervention that may be required in a strategy context. The goal of interpretation is to describe the shared viewpoint or worldview modelled by each of the factors. This involves articulating the perspectives based on the composite Q-sort for each of the factors identified. Whilst this should be holistic and consider all potentially meaningful statements, particular attention is given to statements that elicit the greatest strength of opinion and those statements that statistically distinguish one worldview from another. For example, subgroups may concur over the statement concerning bullying as a rite of passage – all participants agreeing or disagreeing. On the other hand, the statement may appear in different positions across the sorts; indistinguishable from a random pattern. Or it may be that the statement is one of those placed consistently by one subgroup identified in Stage 5 and differently by other subgroups. By considering all the statements that define a subgroup, in contrast to other subgroups, it becomes possible to garner insights into how the programme (and possibly programme stratagems) have influenced the worldviews of participants.

Thus, Q allows specific groups of participants to be identified based on statistically distinct shared perspectives. This is akin to a typology based on viewpoints rather than psychological essences. Such a typology allows the disparate effects of an intervention to be understood and its effects to be placed in context. Only a limited number of participants are necessary to conduct a Q methodological study (van Exel and de Graaf 2005) since the goal is normally to identify the dominant perspectives. All that is necessary is sufficient participants to establish the existence of a factor and allow its comparison with other factors (Brown 1980). According to van Exel and de Graaf (2005), "The aim is to have four or five persons defining each anticipated viewpoint, which

are often two to four, and rarely more than six". Only a limited variety of independent viewpoints exist on any topic (Brown 1980) and as such any well-structured Q sample, containing the wide range of existing opinions on the topic, will reveal these perspectives (van Exel and de Graaf 2005). What the technique does not allow, given the relatively small samples usually employed, is extrapolation to how representative each perspective is within the population as a whole. This is often unimportant but could nevertheless be determined subsequently by administering a larger scale survey based on the extracted perspectives (factors).

Factor analysis provides various outputs to aid this interpretation, describing, for example, which statements best define a factor, and which define no factor (i.e. consensus statements) and listing the statements sorted from consensus to disagreement. How these outputs are then interpreted is largely derived through the lens of existing Q Methodology literature. Typically, when interpreting results, researchers fashion a label for each factor and narrate a viewpoint that appraises the condition of that factor (Eden, Donaldson and Walker 2005). These factor definitions therefore present numerical and textual data simultaneously, in scope, impact and how the factors may be interpreted and therefore they still structure how the statements are viewed.

5.5.5.7 Evaluation and Summary

Having identified and interpreted a typology of statistically valid worldviews, and reviewing how behaviour or worldview has changed, it was possible to review all the available evidence to ask what works, for whom and why. If other aspects of the evaluation have gone well, the method may even generate some useful answers. The purpose of this evaluation is to inform the stakeholder of the nature and scope of intervention to mediate and intervene on any contentious issue that may undermine the durability of the strategy narrative. This study does not seek to dictate compromise between extremes; it is offered as an open space outside of this polarity to debate more broadly the health of existing strategy. It will allow stakeholders to address the concerns of groups without prejudice to the positions that others may take and seeks consensus and convergence in relation to the empirics of the study. This suggests a convention according to

Lehrer and Sneegas (2018) enabling stakeholders with different views and levels of power to acknowledge one another and work together outside of their areas of disagreement.

Lehrer and Sneegas (2018) go onto recommend that Q Methodology provides quantitative statistical solutions that may so determine each factor in isolation and in comparison, to other factors. This quantitative solution provides analysts with leverage to substantially report the implications of the factor loadings and their meaning. In addition to these benefits the process of participating in a Q Sort itself, ranking statements by physically moving and sorting statements provides a accessible way of emphasising that many viewpoints are not necessarily shared truths, and that there can be some common benefit to engaging with, rather than dismissing, contrary views.

Both Phelan (2015); and Watts and Stenner (2012) argue that using Q Methodology together with a stakeholder process is a valuable tool for operationalising the social constructionist task of blurring dichotomies. Further, it may do so in a way more accessible way to some than other methods commonly used for this kind of enquiry; in conjunction with a stakeholder process to analyse and build on study results as a more elegant way to approach controversial issues freed of the need to defend worldviews.

5.5.6 Data collection: Part Two – Mapping Positions

This project seeks to link the act of discourse as an act of annunciation and that that produces a semiotic function (Smith 2013) . Moreover, the discussion argues that the semiotic function occurs as actors accomplish a division between our exteroceptive and interceptive worlds. This combination takes the form of "taking a position". The transitive nature of taking a position is the act of prolonging the phenomenological axiom in order to create a semiotic axiom. It is the nature of discourse between polar opposites, of certainty and ambiguity, which is of interest to this study. This paper may elucidate that the balance between certainty and ambiguity determines the degree of adoption of strategy at an individual level.

The proposal for this methodological tool is that by combination researchers are able to measure the nature of signification and establish a position on the semiotic square. In Representamen, Greimas (Hebert 2006) tells us that there is an absence of signification as actors move away from the S^1 and S^2 (practical) axis; and that an interpretation towards the $-S^2$ and $-S^1$ (emotional) axis may be considered as neutral or agnostic. The corollary is, adopting a position toward S^1 and S^2 axis would then suggest an interpretation and signification of Object and therefore lead to the habituation of a final logical interpretant linking past experience with the present (Hebert 2006) .

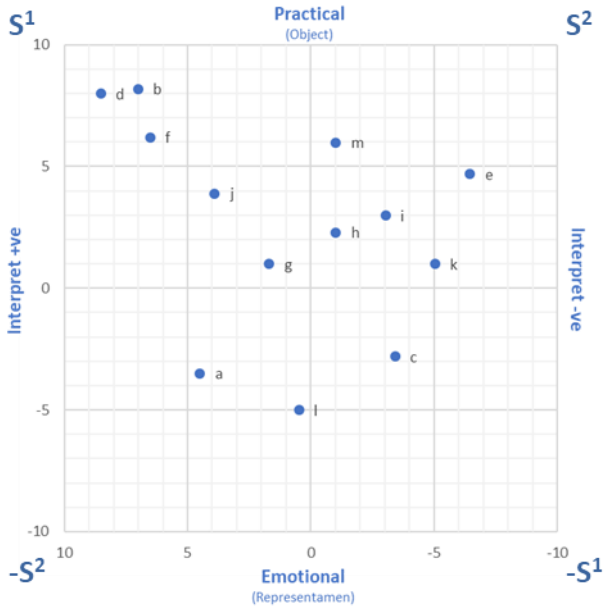


Figure 18: Plotting of Taking a Position across the Semiotic Square (Example)

Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant below set out the variables respondents in the stakeholder group were asked to consider for the Q Methodology (Part One); and in the questionnaire (Part Two) where they were simply asked to rate their agreement or disagreement with the statements. The variables are set in terms that are aligned to the Peircean Triad where Table 15: Part One and Two Variables aligned to the Representamen contains statements relating to Firstness; Table 16: Part One and Two Variables aligned to the Object contains statements relating to Secondness; and Table 17: Part One and Two Variables aligned to the Interpretant relates to conditions of Thirdness.

5.5.6.1 Variables – Representamen (Firstness)

ID	Part One Q Sort Statement	Rationale	Part Two Rating Variable
1	I feel a strong sense of participation in this strategy.	Level of involvement in the construct. Test for coadunation.	How would you rate your level of participation in the development of strategy.
2	I am very aware of the key components and objectives of the strategy.	Awareness of strategy artefacts. Test the awareness of the scope of strategy.	How would you rate your level of awareness of the scope of strategy.
3	I fully understand the key components of strategy.	Cognisance of artefacts. Immediate recognition of artefacts.	How would you rate your level of understanding strategy components.
4	The strategy is based upon sound analysis of the need for change.	Trimmed ambiguity, the level of ambiguity held.	How would you rate the clarity of analysis in the current situation of strategy context.
5	I am confident in my interpretation of the need for change.	Predisposition towards construct, partiality.	How would you rate your confidence in assessing initial the analysis of current situation.
6	The narrative that describes the need for change is very interesting.	Level of Interest, curiosity in definition of the artefacts.	How would you rate your level of interest in the symbols contributing to the construct of strategy.
7	Outcome statements are very relevant to the strategy.	Symbiotic relationship and perceived relevance of artefacts to strategy.	How would you rate the overall relevance of artefacts to strategy.
8	I strongly identify with the need for change.	Connectivity with artefacts and a desire for access to the construct.	Do you have a strong connection with the symbols contributing to the construct of strategy.
9	There is a strong consensus on the assumptions that this strategy is based upon.	Share of voice. Level of resonance with artefacts.	How would you rate the community share of mind regarding the inputs to strategy.
10	I was very involved in the development of this strategy.	Spatial distance in terms of perceived proximity and relevance of artefacts.	How closely related to the contracts of strategy do you feel.
11	The reasons for this strategy is hard to recognise.	Level of reasoning towards strategy in terms of context and interpretation.	Do you recognise the reasons for this strategy.
12	This strategy is not relevant to me.	Level of insouciance and agnosticism.	How would you rate your level of scepticism towards the strategy.

Table 14: Part One and Two Variables aligned to the Representamen (sources referenced in Annex 2: Variables (Strategy Artefacts)).

5.5.6.2 Variables – Object (Secondness)

ID	Part One Q Sort Statement	Rationale	Part Two Rating Variable
13	I agree with my peers on the current situation.	Relation of construct to others, community accord, congruence.	How would you rate your alignment to others regarding their assessment of the current situation.
14	The quality of evidence upon which the strategy is based is very strong.	Synchronicity with existing artefacts and concurrence with existing knowledge.	How would you rate the quality of the ability of the knowledge base to form a strategy.
15	The need for change is easily challenged.	Test for equivocation and trimmed tergiversation.	How would you rate your level of repudiation of artefacts in forming strategy.
16	Aims and objectives are based upon strong evidence.	Relevance to context, relatedness to aims and objectives.	How would you rate the aims and objectives as being evidence based.
17	There is a broad consensus of agreement for the strategy.	Rapport with existing knowledge base, simpatico.	How would you rate your empathy with strategy.
18	My contribution to the strategy is valued by my peers.	Perceived level of contribution.	How would you rate the value of your contribution by your peers.
19	The strategy is a clear and unambiguous statement of intent.	Interpretation of artefacts., understanding of the construct.	How would you rate your ease of understanding strategy artefacts.
20	The community understands the reasons for the need for change.	Level of partisanship towards artefacts.	Do you believe artefacts are being understood by the strategy community.
21	I am free to interpret the strategy as I see it.	Degree of independence and self-determination from strategy artefacts.	How do you rate your autonomy in defining strategy artefacts.

ID	Part One Q Sort Statement	Rationale	Part Two Rating Variable
22	Community interpretation of the strategy is strong.	Degree of sectarianism and discrimination.	How would you rate your beliefs in the interpretation of strategy artefacts within the community.
23	I agree with my peers' interpretation of this strategy.	Degree of isolation or connectedness with the strategy.	I feel very connected to my peer group by this strategy.
24	Do you feel threatened by the objectives of this strategy.	Resistance to interpretation.	How would you rate your conviction regarding the objectives in the strategy.

Table 15: Part One and Two Variables aligned to the Object (sources referenced in Annex 2: Variables (Strategy Artefacts)).

5.5.6.3 Variables – Interpretant (Thirdness)

ID	Part One Q Sort Statement	Rationale	Part Two Rating Variable
25	The strategy will be easily achieved.	Ability to grow and form through strategy.	How would you rate the achievement of strategy outcomes.
26	I have the resources needed to fulfil the objectives of the strategy.	Level of belief, orthodoxy.	I have the resources needed to fulfil the objectives of the strategy.
27	The way implementation is monitored makes sense to me.	Group synergy and holism, level of coordination and solidarity.	How would you rate your agreement with the way strategy is monitored.
28	My performance is clearly defined.	Access to the construct through, transparency of the construct.	How would you rate the transparency of performance assessment.
29	I am strongly committed to this strategy.	Conformity and allegiance to the construct.	How would you rate your commitment to strategy.
30	The strategy lacks clarity and seems to have lost its way.	Degree of dependence on strategy, level of obligation.	How would you rate your level of obligation in the prosecution of strategy.
31	I have autonomy to make decisions regarding this strategy should the need arise.	Freedom of participation and latitude for discretion.	How would you rate the freedom you enjoy to decide what should be done to achieve strategy outcomes.
32	Sanctions exist should I make a wrong decision.	Level of cooperation, a test for commination.	How would you rate the level of sanction in not achieving strategy outcomes.
33	The strategy limits my autonomy.	Threat to personal domain, the durability of personal jurisdiction.	How would you rate the personal impact on your jurisdiction.
34	Freedom and autonomy are important to me.	Personal opportunity and self-determination.	How would you rate the level of self-determination that the strategy offers.
35	Benefits to the wider community are important to me.	Community wellbeing and citizenship.	How would you rate your level of citizenship in regard to current narrative.
36	Personal benefit is more important to me.	Participation and synchronicity quotient.	How would you rate your enthusiasm towards the benefit others may derive.
37	Exploiting new opportunities created by the strategy are important to me.	Dividend from strategy and perceived personal value obtained.	Do you have a strong personal investment in the inputs to strategy.
38	Current interpretation of the need for change threatens my current position.	Test for anonymity as artefacts are perceived as threatening.	Do the inputs used to develop the strategy appear threatening.
39	This strategy threatens my future prospects.	Level of interest and empathy towards the construct.	How would you rate the positive level of impact that strategy has directly on you.
40	Change is happening but does not appear relevant to me.	Currency and relevance of strategy.	How would you rate the relevance of current strategy.
41	Aligning myself to the strategy safeguards my future prospects.	Relatedness through utility of artefacts in strategy.	How would you rate your ability to appropriate the utility of strategy artefacts.
42	The strategy story so far seems very believable.	How well is strategy communicated.	How would you rate success on the basis of current strategic narrative.
43	This strategy is a key personal priority.	Test for vicissitude and habituation.	How would you rate the imperative to develop strategy.
44	The need for change is urgent.	Resistance to change.	How would you rate the urgency for change.

ID	Part One Q Sort Statement	Rationale	Part Two Rating Variable
45	I am happy to accept the changes that strategy brings.	Individual habituation and therefore ease of personal change.	How likely are you to conform to change required by the strategy.
46	I feel the community has a strong desire for change.	Community habituation.	How likely do you feel the community will conform to change required.
47	I feel that my community has the resources needed to fulfil the objectives of the strategy.	Capacity for change, community capability.	I feel that my community has the resources needed to fulfil the objectives of the strategy.
48	I am a key influential stakeholder in this strategy.	Level of perceived influence.	How would you rate your level of influence in strategy formulation.

Table 16: Part One and Two Variables aligned to the Interpretant (sources referenced in Annex 2: Variables (Strategy Artefacts)).

5.5.6.4 Respondent Analysis

This methodology forms Part Two of the research tools adopted that would inform the relative positions that actors have taken on the basis of their response to each of these statements. The calculated means of each of the three elements in Peirce's triadic model of interpretation would help to plot the respondent's position on Greimas's Semiotic Square. Scores relating to Firstness/Secondness (where variables 1 to 12 and 13 to 24 were aligned to the Representamen and Object respectively) would recognise the level of interpretation of the artefact. Low scores on this vertical access would point to low recognition and lack of context or experience with the artefact; or even an unwillingness to acknowledge the artefact's existence. Conversely a higher score on this axis would suggest a higher degree of recognition and context of the artefact that corresponds to past and/or present experience. High mean scores on the horizontal access are aligned to Interpretant variables that measure Thirdness on a positive or negative dexis orientated to S^1 or S^2 respectively.

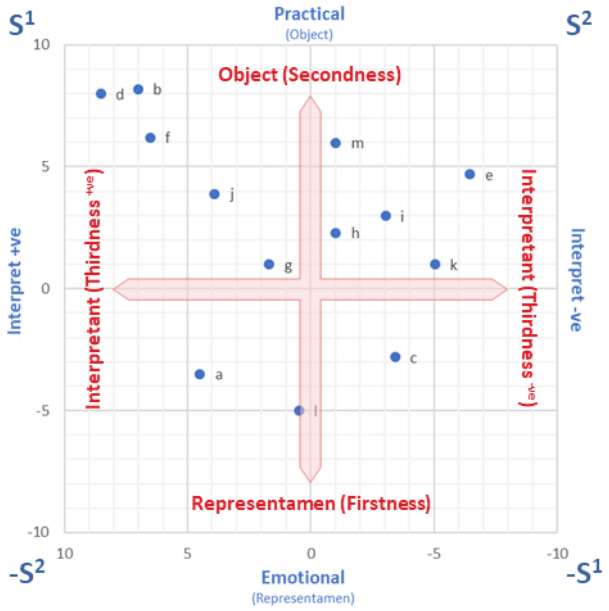


Figure 19: Plotting of Taking a Position across the Semiotic Square using Peircean Triad

5.5.6.5 Summary

This focus on discourse between polar opposites, of certainty and ambiguity, is the means by which the methodology in Part Two seeks to explicate the balance between certainty and ambiguity and so determine the degree of adoption of strategy at an individual level.

Using semantic scaling techniques may give rise to issues of central tendency from respondents (McGivern 2009), however the researcher is confident in the validity of the data obtained by this research tool. This confidence is framed by the nature of respondents being senior managers in a strategy context who hold concerted views on strategy, often expressed in the discourse of strategy. These views were framed by the milieu of social constructs described in Table 15: Part One and Two Variables aligned to the Representamen; Table 16: Part One and Two Variables aligned to the Object; and Table 17: Part One and Two Variables aligned to the Interpretant above, contextualised in the frame of Peirce's Triadic Semiotic model to help explain 'why' actors adopt a particular position in the strategy discourse.

5.6 Chapter Summary

The purpose of Chapter Five is to define a methodological approach to the whole enquiry presenting the philosophical assumptions underpinning this research through a research strategy; and research design narrative. Furthermore, the chapter also discusses in detail the research

framework, discussing the parameters and scope of the methodology chosen to achieve the research aims. Chapter Five confirms the research aims and discusses the structure and scope of the methodology to achieve these research aims. Chapter Five defines the scope and limitations of the research design and situates the research amongst existing research traditions. The overarching ambition of this chapter links methodology to existing semiotic theory that will help to explicate the durability of strategy. This focus on the semiotic components; the artefacts; and the vocabulary; of strategy discourse will so determine how actors in strategy take positions on the basis of their interpretation of these artefacts.

Chapter Six will discuss the results of the survey designed in this chapter. The aim of quantitative analysis is to offer a clear numerical stance with respect to the positions taking by actors engaged in a strategy narrative. The remaining parts of this chapter are devised as follows. Part One details the process and the extraction of data collected by the Q Methodology elaborated in Chapter Five by the Part One Q Sort tool. Part Two details the process and the extraction of data collected by the Rating Survey elaborated in Chapter Five by the Part Two Rating research tool. Chapter Six analysis of the data will contribute to the discussions in the final chapters of this thesis, namely the Findings and Conclusions.

6 CHAPTER SIX – Data Analysis

6.1 Introduction

Chapter Five defined a methodological approach to the enquiry presenting the philosophical assumptions underpinning this research through a research strategy; and research design narrative. The chapter also discussed the research framework, discussing the parameters and scope of the methodology chosen to achieve the research aims. Chapter Six elaborates on the data extraction techniques the Q Sort data elaborated in Chapter Five using IBM SPSS 24 software suite.

6.2 Data Collection

The research tools were sent to all members in the senior management group. URLs for Part One Q Sort; and Part Two Rating survey tools were provided, and this solicited 10 respondents out of the 18 that constitute the group, a 55% response rate. There was some intervention by the researcher with some respondents who required assistance to help them navigate through complexity in the online tools.

6.3 Data Extraction Process

IBM SPSS Statistics 24 was used to conduct data extraction and factor analysis as a method of data reduction that facilitated underlying unobservable (latent) variables that reflect observed variables (manifest variables). The relationship of each variable to the underlying factor was expressed by factor loading. These loadings are indicative of perceptions held within the senior management team as a result of their interpretation of strategy artefacts (variables) presented to them in the Q Sort research instrument. What attracts interest in the factor loadings is the degree of communality, which is the extent to which a variable may correlate to all others in that factor. Communality values nearer to 0 are considered less significant than those values nearer to 1 that may be considered as a significant variable that contributes to defining that particular factor.

6.3.1 SPSS Factor Analysis

The first stage in the process is to open the dataset containing the complete survey data and then select all, or only those variables that are relevant to the extraction requirements.

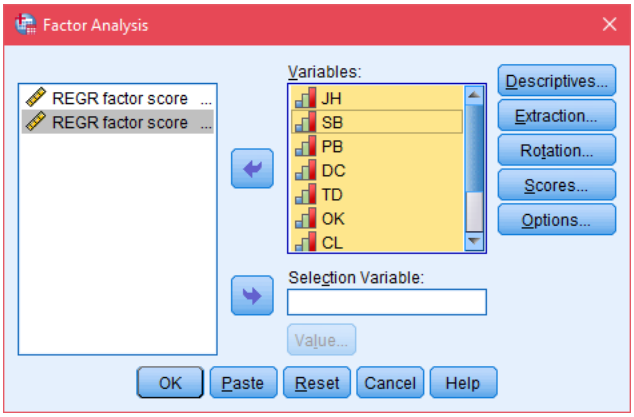


Figure 20: Stage One - SPSS Factor Analysis

6.3.2 SPSS Factor Descriptive Statistics

The coefficients option produces the R-matrix, and the significance levels option a matrix indicating the significance value of each correlation in the R-matrix. The Determinant option tests for multicollinearity or singularity in the matrix. KMO and Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations among variables are small. Bartlett's test of sphericity tests whether the correlation matrix is an identity matrix, which would indicate that the factor model is inappropriate (Field 2009) .

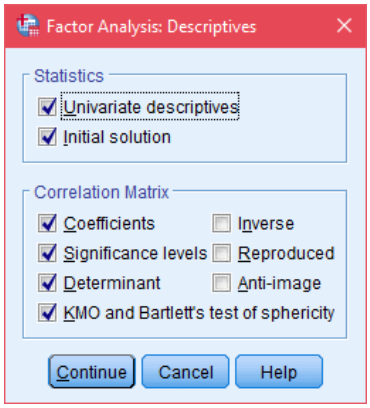


Figure 21: Stage Two - SPSS Factor Analysis Descriptives

The next output from the factor analysis descriptives process is the correlation coefficient (Chetty and Goel 2015). A correlation matrix is a simple numbers array that reports the correlation coefficient between a single variable and every other variable in the investigation. The

correlation coefficient between a variable and itself is always 1, hence the principal diagonal of the correlation matrix contains 1. The correlation coefficients above and below the principal diagonal are the same. With respect to Correlation Matrix if any pair of variables has a value less than 0.5, the analyst may consider dropping one of them from the analysis (by repeating the factor analysis test in SPSS by removing variables whose value is less than 0.5). The off-diagonal elements (The values on the left and right side of diagonal in the table below) should all be very small (close to zero) in a good model.

		V1	V2	V3	V4	V5	V6	V7
Correlation	V1	1.000	.763	.743	.741	.065	-.268	-.128
	V2	.763	1.000	.857	.866	.535	-.643	-.062
	V3	.743	.857	1.000	.631	.481	-.455	.106
	V4	.741	.866	.631	1.000	.270	-.402	.036
	V5	.065	.535	.481	.270	1.000	-.802	.230
	V6	-.268	-.643	-.455	-.402	-.802	1.000	.363
	V7	-.128	-.062	.106	.036	.230	.363	1.000
	V8	.229	.000	-.119	-.075	-.081	.177	.129
	V9	.811	.803	.502	.911	.054	-.363	-.268
	V10	.603	.212	-.009	.490	-.496	.307	-.059
	V11	-.020	.511	.294	.526	.409	-.563	-.206
	V12	.481	.277	.464	.520	-.130	.164	.307

Figure 22: Correlation Matrix extract for Cluster 1.

Chetty and Goel (2015) further suggest that the first output from the analysis is a table of descriptive statistics for all the variables under investigation. Typically, the mean, standard deviation and number of respondents (N) who participated in the survey are given. Looking at the mean, one can conclude that V1, V3, and V12 appear significant to the respondent base.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N	Missing N
V1	3.14	1.574	7	0
V2	2.00	1.528	7	0
V3	3.14	2.545	7	0
V4	.71	.756	7	0
V5	2.00	1.633	7	0
V6	.14	2.035	7	0
V7	2.14	1.773	7	0
V8	3.29	1.254	7	0
V9	.43	1.902	7	0
V10	-2.71	2.059	7	0
V11	-2.71	1.496	7	0
V12	-4.57	.787	7	0
V13	1.57	1.272	7	0

Figure 23: Descriptive Statistics extract for Cluster 1.

6.3.3 SPSS Factor Analysis Extractions

There are several ways to conduct factor analysis and the choice of method depends on many things. For our purposes this researcher will use principal component analysis, which strictly speaking isn't factor analysis; however, the two procedures often yield similar results. The Display box has two options: to display the unrotated factor solution and a scree plot. A plot of the variance that is associated with each factor. This plot is used to determine how many factors should be kept. Typically, the plot shows a distinct break between the steep slope of the large factors and the gradual trailing of the rest (the scree). The unrotated factor solution is useful in assessing the improvement of interpretation due to rotation. If the rotated solution is little better than the unrotated solution, then it is possible that an inappropriate (or less optimal) rotation method has been used. This displays unrotated factor loadings (factor pattern matrix), communalities, and eigenvalues for the factor solution.

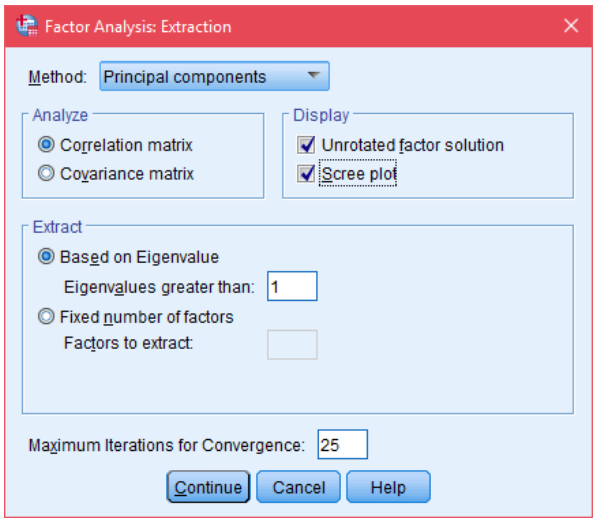


Figure 24: Stage Two - SPSS Factor Analysis Extraction

For most factor analysis purposes, this researcher is only interested in eigenvalues that are greater than 1. This data reduction process draws our attention to only those factors that calculate greater than 1 and helps to prevent analysts from wandering into areas of trivial significance. Scree plots aid us in this selection process where eigenvalues are plotted against factor (sometimes called components) numbers. The scree plot is a graph of the eigenvalues against all the factors (Cattell 1966). The graph is useful in selecting relevant factors to retain.

The point of interest is where the curve starts to flatten. It can be seen that the curve begins to flatten between factors 3 and 4. Note also that factor 4 onwards have an eigenvalue of less than 1, so only three factors have been retained.

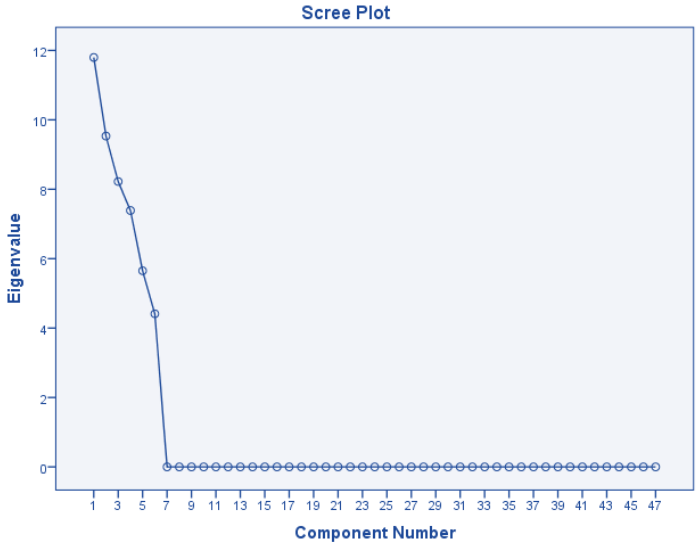


Figure 25: Scree Plot of Eigen Values for Cluster 1.

Eigenvalue actually reflects the number of extracted factors whose sum should be equal to number of items which are subjected to factor analysis. The next item shows all the factors extractable from the analysis along with their eigenvalues.

The Eigenvalue table has been divided into three sub-sections, i.e. Initial Eigen Values, Extracted Sums of Squared Loadings and Rotation of Sums of Squared Loadings. For analysis and interpretation purpose this analysis is only concerned with Extracted Sums of Squared Loadings. Here one should note that the first factor accounts for 46.4% of the variance, the second 18.5% and the third 17.01%. All the remaining factors are not significant (Table 5). The following synopsis may be useful in defining terminology (Krishna Kumar and Nagajothi 2018):

I. **Component:** As can be seen in the Communalities table 3 above, there are 8 components shown in column 1 under table 3.
II. **Initial Eigenvalues Total:** Total variance.
III. **Initial Eigenvalues % of variance:** The percent of variance attributable to each factor.
IV. **Initial Eigenvalues Cumulative %:** Cumulative variance of the factor when added to the previous factors.
V. **Extraction sums of Squared Loadings Total:** Total variance after extraction.

VI. **Extraction Sums of Squared Loadings % of variance:** The percent of variance attributable to each factor after extraction. This value is of significance to us and therefore we determine in this step that they are three factors which contribute towards key artefacts in strategy.

VII. **Extraction Sums of Squared Cumulative %:** Cumulative variance of the factor when added to the previous factors after extraction.

VIII. **Rotation of Sums of Squared Loadings Total:** Total variance after rotation.

IX. **Rotation of Sums of Squared Loadings % of variance:** The percent of variance attributable to each factor after rotation.

X. **Rotation of Sums of Squared Loadings Cumulative %:** Cumulative variance of the factor when added to the previous factors.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.797	25.101	25.101	11.797	25.101	25.101	9.690	20.618	20.618
2	9.532	20.282	45.383	9.532	20.282	45.383	8.863	18.857	39.475
3	8.221	17.492	62.874	8.221	17.492	62.874	8.202	17.452	56.927
4	7.388	15.719	78.594	7.388	15.719	78.594	8.147	17.333	74.260
5	5.650	12.022	90.616	5.650	12.022	90.616	7.402	15.750	90.010
6	4.411	9.384	100.000	4.411	9.384	100.000	4.695	9.990	100.000
7	5.441E-15	1.158E-14	100.000						

Figure 26: Total Variance for Cluster 1.

(Johnson, I. 2006b) states that eigenvalues are used as a factor selection cut-off. Johnson further relates that the scree test (Cattell 1966) has been extensively researched (Reise, Waller and Comrey 2000) and remains one of the preferred and least error-prone ways to select factors. Variance accounted for is another guideline, with a typical target being 50% of total variance (Streiner and Norman 2008). For example, if the eigenvalue and sense tests fall just short of 50% variance accounted for, and an additional factor lifts above the 50% mark, the researcher may decide to add the factor. This is supported by other research on principle component analysis that finds that more factors are better than fewer factors when making such choices. Factor selection for this research was based on a combination of eigenvalue of 1, scree plot elbow, and cumulative variance support. In each case, eigenvalue agreed with the scree test, and variance did not need improving or would not have improved enough to warrant an additional factor.

6.3.4 SPSS Factor Analysis Rotation

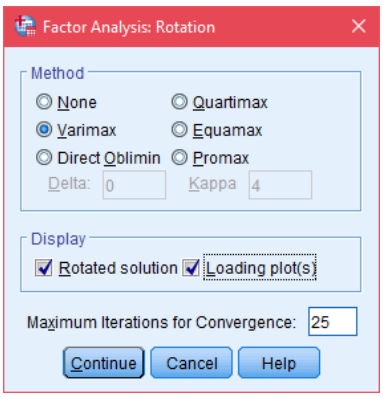


Figure 27: Stage Two - SPSS Factor Analysis Rotation

While varimax is the most popular option across research literature and usually produces simpler, easier to interpret, factor solutions, since all orthogonal rotation methods produce uncorrelated factors, they often are not the best. Oblique transformation methods, due to allowing factors to correlate, produce less simple models, however, it is argued that it is beneficial, since such models more accurately reflect reality, in other words, have higher explanatory power, with an additional benefit of better reproducibility of the results (Costello and Osborne 2005). This method simplifies the interpretation of the factors.

An important feature of factor analysis is that the axes of the factors can be rotated within the multidimensional variable space. Factor rotation such as Varimax looks first for the strongest correlations between variables and the latent factor and makes that Factor 1. Factor analysis rotation then looks for the second set of correlations and calls it Factor 2, and so on. Sometimes, the initial solution results in strong correlations of a variable with several factors or in a variable that has no strong correlations with any of the factors. In order to make the location of the axes fit the actual data points better, SPSS Varimax can rotate the axes. Ideally, the rotation will make the factors more easily interpretable.

6.3.4.1 Component matrix

The Figure 28: Component Matrix extract for Cluster 1. below shows the loadings (extracted values of each item under 6 variables) of the variables on the factors extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. The gaps (empty

spaces) on the table represent loadings that are less than 0.25, this makes reading the table easier.

Component Matrix[a]

	Component					
	1	2	3	4	5	6
V1	-.688		-.368	-.503		-.332
V2	-.814		-.464		-.272	
V3	-.783		-.265		-.479	
V4	-.783		-.331	-.403		.329
V5	-.437		-.501	.716		
V6	.651	.424	.314	-.527		
V7		.717	-.305		-.260	.533
V8	.454		-.779	-.299		-.295
V9	-.652	-.295	-.367	-.581		

Figure 28: Component Matrix extract for Cluster 1.

6.3.4.2 Rotated component matrix

The idea of rotation is to reduce the number factors on which the variables under investigation have high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easier. Looking at the table below, it can be seen that V1, V2, V3 and V4 are substantially loaded on Factor (Component) 1 while V3, V5 and V6 are substantially loaded on Factor 4 and are therefore worthy of note.

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
V1	-.837	.270	-.371			
V2	-.839			-.458		
V3	-.831			-.500		
V4	-.821				.364	.414
V5				-.965		
V6				.772	-.529	
V7		.376			-.590	.660
V8			-.977			
V9	-.793		-.288		.496	

Figure 29: Rotated Component Matrix extract for Cluster 1.

6.3.5 SPSS Factor Analysis Factor Scores

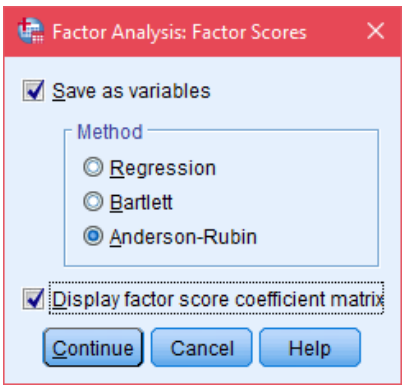


Figure 30: Stage Two - SPSS Factor Analysis Factor Scores

Anderson-Rubin Method is a method of estimating factor score coefficients; a modification of the Bartlett method which ensures orthogonality of the estimated factors. The scores that are produced have a mean of 0, have a standard deviation of 1, and are uncorrelated. Display factor score coefficient matrix shows the coefficients by which variables are multiplied to obtain factor scores and also shows the correlations between factor scores.

6.3.6 SPSS Factor Analysis Options

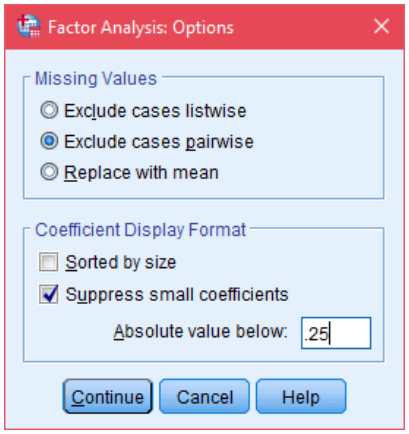


Figure 31: Stage Two - SPSS Factor Analysis Options

This final part of the SPSS factor analysis process allows the analyst to extract or ignore values pairwise or supress data below a given value. It is important that the totality of content of a construct is represented and attention does need to be given to what may appear as superfluous and therefore classified as redundant factor loading (Schriesheim *et al.* 1993). To cover the construct of the factor adequately it needs to be understood that superfluous variables may indeed correlate highly with many other variables and inter-variable correlations may give weight

to the same phenomenon. By contrast, a variable with few inter-relationships may point to discreet phenomenon.

6.4 Chapter Summary

Chapter Six discussed the means of data collection that took place and the methods of data extraction techniques using the IBM SPSS 24 software program from the Q Sort data derived from the respondent base. Chapter Seven will define the extracted data and analyse the factor components in statistical terms. The basis of this analysis will be used to interpret the data and justify findings from the source data. The relationship of variables to the underlying factors will be determined by the weighting in the eigenvalues and factor loadings. These loadings are indicative of perceptions held as a result of interpretation of strategy artefacts (variables).

7 CHAPTER SEVEN – Findings

7.1 Part One Introduction

Chapter Six discussed the means of data collection that took place and the methods of data extraction techniques using the IBM SPSS 24 software program from the Q Sort data derived from the respondent base. Chapter Seven will define the extracted data and analyse the factor components in statistical terms. The basis of this analysis will be used to interpret the data and justify findings from the source data. The relationship of variables to the underlying factors will be determined by the weighting in the eigenvalues and factor loadings. These loadings are indicative of perceptions held as a result of interpretation of strategy artefacts (variables).

The complexity of the Q Sort data demanded a logical and consistent analysis of the data to triangulate a semiotic view of strategy discourse. The reason for resorting to a mixed methodology is summed up by Greene, Caracelli and Graham (1989) . The chosen method of data extraction seeks corroborating evidence of results by extracting analysis in four phases at three different levels outlined in Table 17: Factor Analysis Extraction Phases below.

Factor analysis was conducted in four phases.	Definition
I. Factor Analysis by Variance	Phase one determines six component factors by variable that accounted for 79.53% of total variance. This analysis detected the existence of two clusters within the data that required further investigation.
II. Evidence of Clusters	The second phase investigation sought to determine the existence of clusters by analysing respondent cases. This second phase investigation determined the existence of two distinct clusters that accounted for 63.04% of total variance and have been labelled as Cluster 1, which accounts for 43.03% of total variance; and Cluster 2, which accounts for 20.02% of total variance.
III. Factor Analysis for Cluster 1	Phase three subsequently determined six component factors by variable, for Cluster 1.
IV. Factor Analysis for Cluster 2	Phase four subsequently determined component two factor by variable for Cluster 2.

Table 17: Factor Analysis Extraction Phases

The combination of quantitative data from the rationale for each variable; and processed qualitative data allowed the analyst to triangulate (seeking corroboration and convergence of the results emerging from the phases defined above), to capture the essence of each factor (Greene, Caracelli and Graham 1989).

7.1.1 Factor Analysis by Peirce Semiotic Triad

Firstness is about feeling (emotion), as distinct from objective perception, will and thought (Bergman 2009). It is similar to a blank thought-less feeling that one may experience while meditating on a candle flame. If a person continuously looks at the candle flame, and only at the candle flame for a long period of time, he may lose cognizance of the candle or the flame as external objects and may only 'feel' the 'yellow-ness' of the flame. These are sensations minus any attribution to any object. It is a general sensation of a certain quality or latent potentiality. Yellow-ness is a quality or state of being, but it cannot exist by itself. It needs another object to manifest or embody itself. When another object acts as an embodiment, it leads to secondness.

Secondness occurs when firstness recognises an object through a proposed relationship where firstness is an emotional response and secondness is an intellectual response attempting to categorise the object. This is the level of tangible 'existence' and practical experience. (Short 2007) says that Secondness acts as a constraint or force on firstness. However, Secondness results from arbitrary association, without any influential mediation. In case any influential mediation is involved that tends to move in the direction of interpretation, it leads to Thirdness (Short 2007) .

Thirdness is the mediator through which a First and a Second are brought into relation. It is the construct by which the interpreter defines the cognitive path between first and secondness. It is the conscious categorisation of the interpretation that seeks to establish a position. This can be seen as the pre-determined or habituated mode of thinking (Short 2007). The interpreter's consciousness continually attempts to match the pragmatic purpose of the interpreter. It is this oscillation in the search for habituation where thirdness is normalised as a category of thought, language, representation, and the process of semiosis; it makes social communication possible. Thirdness corresponds to intellectual experience. Thirdness of the intellectual 'mould' is a result of cultural socialisation. Here, the interpreter becomes a third element between the sign and the object. The Third is a bridge between the First and the Second. It is a "synthetic consciousness driven by the sense of learning, thought, memory and habit (Danesi 2004)."

Danesi (2004) associates the first step of physical sensation as firstness, the mind as secondness and culture as Thirdness. It is the sense of 'being' or a quality that is pure. Firstness can be defined for any latently potential quality or state of being, without physical sensation. For example, one can conceive the idea of "large-ness", "healthy-ness", "success-ness", "peace-ness" which can manifest itself either through secondness or Thirdness via signs. The connection of Thirdness with culture socialises the pursuit of a final logical interpretant. Danesi (2004) says that, "we are born into an already fixed context that will largely determine how we view the world around us". Thirdness is farthest away from 'pure perception' because it is coloured and moulded by socialisation of the interpreter.

The factor analysis that follows discusses the interpretation of variables in the context of Peirce's Semiotic Triad.

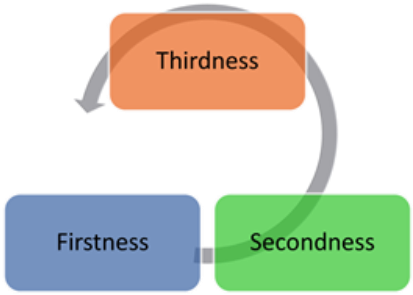


Figure 32: Key to Colour Coding.

The colour coding to the variables in the factor loading map in Figure 34 represent the Peircean Semiotic Triad of Firstness (Representamen); Secondness (Object); and Thirdness (Interpretant) where factor loading to variables is between 1 and 0.5000. Lower factor loadings to variables between 0.4999 and 0.2500 are described here as 'shadow' variables and are shown in lighter colours. The 'shadow' variables are not considered as having the same significance as those that have a factor loading greater than 0.4999, nonetheless they are worthy of note and should be acknowledged in terms of inclination towards the rationale of those variables so described. The colour coding and mapping help to explain the nature of interpretation as actors within the strategy discourse search for a final logical interpretant through the process of habituation (Bergman 2009).

7.1.2 Factor Analysis by Variable

Initial data extraction produced the following factor analysis data. The number in the component column in Table 18 below shows 9 factors of which, 6 show significant percentage variance that account for 79.5% of the total variance for this extraction.

As explained in Chapter Six factor loadings were extracted using SPSS 24. In Table 19 below are the extracted factor loadings for each of the variables used in Q Sort. Factor loadings range in value from -1 or +1 through to 0. In order to aid interpretation of complexity within each factor I set the factor loadings onto a map using a protractor to plot the equivalent angle for each factor loading. Using a cosine formula from Pythagorean theory the analyst converted the factor loading to show that a value of or near to -1 or +1 would equal near Zero on each side of the protractor below, negative values were plotted to the left of the perpendicular and positive values to the right. In other words, the more significant variables with higher factor loading values are shown as low angle trajectories and therefore more orientated to the horizontal. Thus, variables with smaller factor loadings are more perpendicular in nature. For the purposes of interpretation, factor loadings from +/-1.000 to +/-0.5000 were deemed to be of significance; and those with values of +/-0.4999 to +/-0.2500 were deemed less significant but still worthy of consideration in factor interpretation.

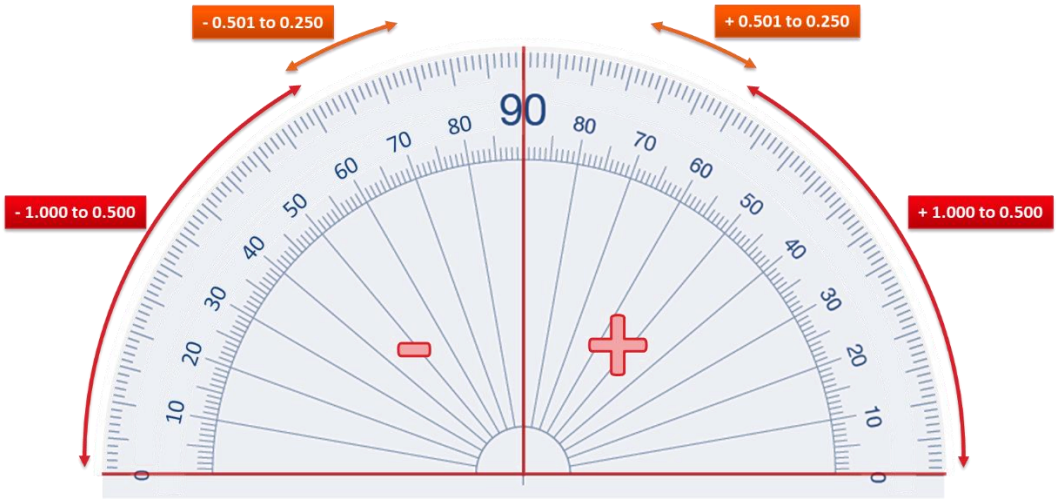


Figure 33: Radian to Angle Conversion Protractor.

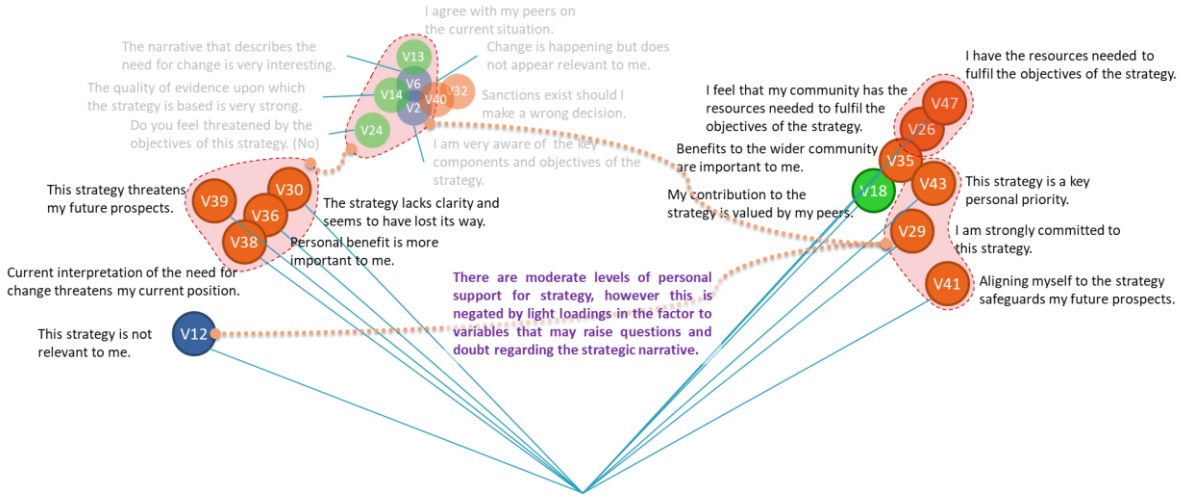


Figure 34: Example of Factor Loading to Angle Conversion Mapping.

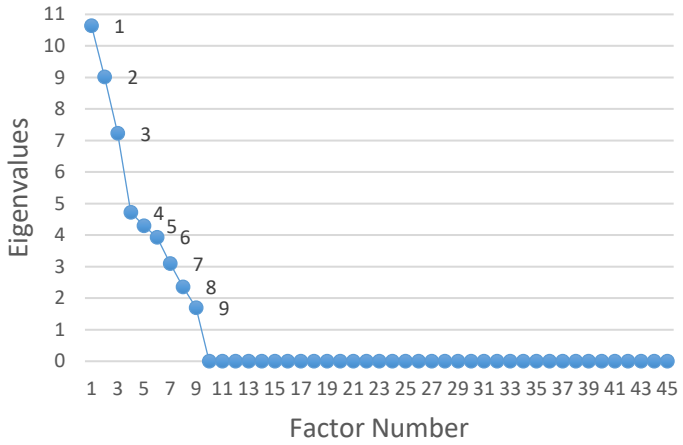


Figure 35: Initial Eigen values shown as a scree plot for Factor Analysis by Variable.

Initial data extraction produced the following factor analysis data. The number in the component column in Figure 35 above and Table 18 below shows 9 factors of which, 6 show significant percentage of variance that account for 79.5% of the total variance for this extraction.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.642	22.642	22.642	10.642	22.642	22.642	8.996	19.139	19.139
2	9.018	19.188	41.830	9.018	19.188	41.830	7.660	16.298	35.437
3	7.231	15.386	57.215	7.231	15.386	57.215	5.753	12.240	47.677
4	4.721	10.044	67.260	4.721	10.044	67.260	5.640	12.000	59.677
5	4.299	9.148	76.407	4.299	9.148	76.407	4.879	10.381	70.058
6	3.936	8.374	84.782	3.936	8.374	84.782	4.453	9.475	79.534
7	3.096	6.586	91.368	3.096	6.586	91.368	3.888	8.271	87.805
8	2.356	5.014	96.382	2.356	5.014	96.382	3.680	7.830	95.635
9	1.701	3.618	100.000	1.701	3.618	100.000	2.052	4.365	100.000

Table 18: Variance by component (Factor)

Rotated Component Matrix

Var	1	Var	2	Var	3	Var	4	Var	5	Var	6	Var	7	Var	8	Var	9
V2	-0.416	V2	-0.720	V5	-0.321	V2	-0.259	V1	0.898	V3	-0.290	V6	-0.273	V4	0.400	V4	0.396
V6	-0.401	V3	-0.395	V8	-0.933	V3	-0.370	V2	0.435	V4	0.385	V7	-0.917	V5	-0.328	V10	-0.425
V12	-0.941	V4	0.473	V12	0.286	V4	-0.362	V3	0.687	V6	-0.408	V15	-0.287	V7	-0.264	V13	0.330
V13	0.446	V9	-0.482	V14	0.270	V5	-0.836	V4	0.403	V7	-0.268	V18	0.369	V13	0.669	V15	0.358
V14	0.434	V10	-0.662	V15	-0.719	V6	0.739	V9	0.713	V9	0.402	V19	-0.370	V19	-0.889	V30	-0.630
V18	0.691	V11	-0.909	V16	-0.502	V10	0.421	V10	0.272	V13	0.252	V20	0.339	V23	0.253	V40	-0.391
V21	-0.304	V13	0.376	V17	0.504	V11	-0.286	V18	0.335	V14	0.756	V23	-0.476	V24	0.458	V41	0.292
V23	0.366	V15	-0.376	V18	0.435	V16	0.702	V31	-0.655	V15	-0.288	V31	0.554	V29	0.390	V43	-0.349
V24	-0.494	V16	0.268	V20	-0.364	V20	0.790	V36	-0.288	V16	0.299	V32	0.251	V34	-0.510	V44	0.496
V26	0.683	V17	-0.727	V21	-0.817	V22	0.884	V37	-0.773	V26	-0.601	V33	0.768	V35	0.477		
V27	0.349	V21	-0.372	V27	0.580	V23	0.644	V39	-0.356	V27	0.718	V39	0.258	V36	-0.397		
V29	0.798	V24	0.683	V35	0.331	V29	-0.292	V44	-0.407	V32	0.601	V40	-0.277	V37	0.263		
V30	-0.696	V25	0.921	V37	0.472	V31	0.260	V45	-0.613	V34	-0.811	V41	-0.273	V42	0.493		
V32	-0.285	V28	0.892	V39	-0.392	V32	-0.253	V46	0.390	V40	-0.678	V42	0.255	V44	0.335		
V35	0.704	V31	-0.319	V40	0.306	V35	-0.273			V43	0.324	V45	0.527	V45	0.288		
V36	-0.756	V32	0.594	V42	0.372	V38	-0.313			V44	-0.270	V47	0.344				
V38	-0.812	V33	0.569	V43	-0.313	V42	0.446										
V39	-0.796	V36	0.273	V45	0.442	V47	-0.456										
V40	-0.387	V42	0.554	V46	0.754												
V41	0.870	V44	0.604	V47	0.382												
V43	0.754	V46	-0.347														
V47	0.683																

Table 19: Factor Loadings by Item (Variable)

Some of the variables are shown to have negative loading values. A negative sign of loading does not indicate any meaning regarding the strength of the variable to the factor. However, it does give meaning that the variable is related in the opposite direction with the factor (Asnawi, Gravell and Wills 2012). For example, V12 statement in Table 19 above relates to *This strategy is not relevant to me.* However, attended with a negative factor loading of -0.941 means that V12 should be interpreted as *This strategy is relevant to me.*

7.1.2.1 Factor 1: Strong Levels of Support for Strategy (Univocality)

This component accounts for 19.14% of the total variance after rotation. Although there appears to be strong evidence of conviction toward strategy the analysed data may be defined as fairly insouciant through lack of participation and threat for some in the study group; which suggests moderate levels of conviction and expectation in what the strategy narrative may be capable of delivering. There are moderate levels of personal support for strategy, however this is negated by light loadings in the factor to variables that may raise questions and doubt regarding the strategic narrative for some.

Test for coadunation had strong factor loadings with a strong awareness of the scope of strategy for some. The level of ambiguity is low with artefacts being immediately recognised. A feeling of

consensus on the recognition of key strategy. However, there is an underlying sense that some in the community do not share the same level of interest in the artefacts. Interpretation of past experience has a strong interpretation relative to the need for change at a community level. The strong factor loadings may be coming from strategy leaders rather than the wider strategy cohort.

7.1.2.2 Factor 2: Spatial distance and low interpretation

This component accounts for 16.3% of the total variance after rotation. Factor loadings suggest a strong operational commitment may exist within personal domains; while negative factor loadings seem to answer to an underlying lack of consensus on overarching strategic intent. The negative factor loadings seem to point towards fog and spatial distance from artefacts, perhaps entropy; while the positive factor loadings seem to pull towards an interpretation that may suggest some form of amelioration through difficulty in defining context and interpretation.

Level of ambiguity held by some seems high in relation to distance from the artefacts in terms of participation; and leads to difficulty in interpreting strategy artefacts, even if some felt a sense of participation in the development of strategy. The spatial distance to artefacts is palpable to an extent that for some actors the level of curiosity in them would appear to be very low.

7.1.2.3 Factor 3: Agency

This component accounts for 12.24% of the total variance after rotation. There may be a hierarchical narrative taking place regarding artefacts and their interpretation. Strategy is not easily challenged. Weaker negative loadings in this factor suggest that evidence is not strong regarding support for the signs upon which the strategy narrative is based. It begs the question as to whether there is a peer group vacuum between some respondents who may be better informed than others, therefore some may be easily persuaded while others may exercise an agency disparity; perhaps leading a feeling of lack of authority and accountability in those who are doubting. Peirce recognised the dyadic nature of semiotic interpretation where uncertain habituation does exist (Cobley 2010). Maybe some spatial distance between strategic intent and the way strategy as practised is extant across this community.

Stronger positive factor loadings may imply a fairly harmonious rapport and habituation with existing knowledge base; however, weaker positive factor loadings suggest groupthink is taking place in the sense that there appears to be a logic of simpatico and a reluctance to diverge from the groupthink discourse. This could be interpreted as anxiety perhaps born through the lack of team spirit and cohesion, leading to a narrative that is perhaps plurivocal in nature and is creating a charivari background noise to the strategy narrative.

7.1.2.4 Factor 4: Sub-Group analysis

This component accounts for 12.0% of the total variance after rotation. There is a fair degree of connectedness with the strategy. Moderate factor loadings for variables in this factor suggest a fairly significant 'community' connectedness to strategy that may suggest the existence of group thinking. Weaker negative factor loading seems to suggest a predisposition towards construct uncertainty, which may be defined as a much stronger factor loading that suggests that some respondents may lack confidence on their interpretation of the need for change. Ambiguous narrative being used to justify strategy may lead to anxiety, uncertainty and perhaps an unwillingness to create and innovate. In this context, being risk averse may constitute an S2 position (Hebert 2006) . Again, there is evidence of an agency problem here that may be related to the transfer of knowledge or lack thereof. This analysis may be pointing to an underlying 'pull' from an as yet unseen factorial dynamic. Factor loading suggests a fair degree of consensus and engagement in the strategy narrative. However, there is some low-level background 'noise' perhaps coming from dissimilar interpretation of artefacts in the narrative.

7.1.2.5 Factor 5: Top-down; Bottom-up

This component accounts for 10.35% of the total variance after rotation. Strong factor loadings suggest the existence of a weak individual habituation and the lack of latitude for discretion by individuals within the community. The negative loading factors seem to suggest that there is an underlying lack of confidence in the strategy community. This may lead to participants being risk averse. This lack of confidence may in itself habituate a narrative that dissipates the effectiveness

of the strategy to achieve stated objectives. That said, there are some strong factor loadings for some variables that relate to community consensus, participation in strategy and understanding of key components that seem to be defining actor's involvement in the construct, in other words coadunation. The analysis of this factor would appear to be consistent with factors four and three above. The level of freedom and latitude for personal interpretation of strategy is quite low; as is the ability to challenge existing orthodoxy on the need for change. This is leading to some equivocation within the strategy group and is weakening the sense of cohesion, accord and congruence.

7.1.2.6 Factor 6: Lack of Orthodoxy

This component accounts for 9.47% of the total variance after rotation. Although there may be some concurrence in interpretation of artefacts some, commination exists in the sense that actors may lack orthodoxy in terms of resources needed to fulfil the strategy requirements as well as some level of self-determination to do so. This doubting may be due to a lack of faith in the fundamental strategy artefacts such as aims and objectives. The light positive factor loadings suggest an element of belief in key strategy artefacts, but this may be undermined by a feeling that there is a lack of freedom to enact contingency; relevance of the strategy story; and the resources required to implement strategy.

While there is some recognition of the scope of strategy, it is hard to reconcile the level of agnosticism that exists towards strategy artefacts. Participants appear to be feeling considerably threatened by the current strategy narrative and seem particularly disinclined to associate themselves with strategy outcomes as this is seen as threatening their individual prospects. This may lead to participants questioning the need for change and is forcing them to exact some spatial distance from the story manifest in negating strategy input as a key personal priority.

Shifting anxieties in the previous factor seem to be 'forcing' some sense of community herding instinct in the face of threats to future prospects; belief in the narrative; and some spatial distance between participants and the narrative.

There is no resistance to the need for change from an individual perspective, however the strong negative loading that is questioning the control and evaluation narrative with the strategy story seems to undermine participants' allegiance to the construct. Perhaps a sense of frustration at the lack of latitude for discretion that is being interpreted as undermining the durability of jurisdiction. And this perhaps is contributing to a feeling that this resistance to change does not exist across the community.

7.1.2.7 Summary of Factor Analysis by Variable

This initial investigation by factor analysis suggests a strong univocal voice in the strategy narrative and as stated it appears that the level of ambiguity is low. Chandler (2007) defines a univocal narrative as one where there is clear consensus, however the lower factor loadings does suggest a pattern of divergence from this univocality concourse. Robichaud, Giroux and Taylor (2004) suggest an alternative approach to that presented above in the notion of meta-conversation conferred as a means of illuminating opposing views to be 'pluralistic and unitary; or multivocal and univocal. Chandler (2007) defines a plurivocal ('polyvocality' where there are multiple voices) narrative as one where there is partiality and discord in the way actors interpret strategy narrative, since strategizing involves multiple contexts where competing goals and interests abound (Balogun *et al.* 2014). Rhetorical analysis is of interest because strategy artefacts are used to construct goal congruence and divergence, consequently a semiotic investigation invests an insight into what degree a strategy may be considered as univocal or plurivocal. As Robichaud et al. (2004) state, language, spoken or written in texts, is the key to understanding how an organisation can be both a single entity and be made up of many different elements, and it is through an analysis of organisational talk and text that a that the nature of strategy conversation can be identified.

The incidence of divergence from a univocal narrative gives rise to the notion of the existence of groupthink within the strategy group. Groupthink is a psychological phenomenon that occurs within a group of people in which the desire for harmony or conformity in the group results in an irrational or dysfunctional decision-making outcome (Janis and Mann 1977) and this may give rise

a tendency to filter narrative, a standard agency problem, where managerial disclosure preferences are not aligned with those of key stakeholders. From a board perspective Bonn and Pettigrew (2009) suggest that the main task of any board of governance, according to agency theory, is to monitor and control management on behalf of the organisation's stakeholders and the existence of agency as an interlocutor bellies their ability to control strategy discourse.

The suggestion of a schism within the strategy group supports Watts and Stenner (2012) view that Q Factor Analysis is its focus on the correlation and analysis of similitudes among individuals and at the same time is ideal for the purpose of development a typology, in this regard cluster analysis, to identify profiles and types of individuals that respond similarly to a certain set of variables. Consequently, individuals are factorised based on responses to variables, and not to variables based on responses given by individuals. However, Watts and Stenner (2012) go on to state that designing a study to compare particular groups or demographics is a good idea and, in their experience, group memberships are rarely the key or determining influence in Q Sort. It is perhaps preferable to discover this after the event, rather than to propose it in advance in the manner of a hypothesis, as abduction and discovery, not deduction from a priori premises, ordinarily provide a foundation for strong Q methodological studies.

The existence of clusters within the strategy group is evidenced by Johnson, Scholes and Whittington (2008) who would recognise the suggestion in the data analysis as emphasising complexity theory on how systems cope with uncertainty in strategy in nonlinear ways. Johnson et al, go on to assert the notion of top-down and bottom up strategy discourse as managers wrestle with the complex array of strategy artefacts in a dynamic and developing strategy discourse. Managers engaged in a bottom up discourse are mindful of the capacity in their own locale to align to the needs of the new strategy guided by a more formal approach suited a top-down, command-and-control view of strategy, where managers at the top make decisions and the rest of the organisation simply implemented them (Johnson, Scholes and Whittington 2008). The initial Q Factor Analysis proves instructive of the interpretation of strategy artefacts and the impact that has on the multiple roles in relation to the management of strategy. According to

Johnson et al there are five defined roles adopted by actors in strategy such as the: Implementation and Control role who align resources to meet strategy needs; 'Sense Making' of strategy in specific contexts avoiding misinterpretation of that intended; Reinterpretation and Adjustment of strategic as a matter of contingency in response unfolding events; a Relevance Bridge in a position to translate change initiatives into a message that is locally relevant; and Advisors to senior management on what are likely to threaten strategy. Beer and Nohria (2009) recognise the dangers of insensitivity to diverse needs in the organisation and go on to suggest it is often helpful to involve those most directly involved in bottom-up planning. Feldman and Pentland (2003) elaborates on the consequences of a lack of care toward bottom up strategy discourse as a plurivocal paradigm that may adopt its own status quo where change agents may actively subvert existing ways of doing things to make clear a fundamental change from the past is that changes in routines may appear to be mundane, but they can have significant impact.

A suggestion in the data is one of a top down strategy discourse that may be exhibiting the characteristics of discourse orthodoxy. According to Johnson, Scholes and Whittington (2008) rationality is a central component of the orthodox language of strategy and from a management perspective, appearing rational is key to making strategy, to be rational is to be seen within the strategy group to be making persuasive sense (Green 2004). They may adopt this form of strategy discourse not just because they are themselves persuaded of the logic of a strategy, but because they believe that by doing so their arguments carry more weight with others, it is the typical way in which strategy is communicated or because, by so doing, it positions themselves as indispensable to strategy (Knights 1992). Petrilli (2015) on the contrary, tells us that meaning is inherently ambiguous and to neglect this particular quality can lead to signifying practices that lay the conditions for the tyranny of dogma and orthodoxy. Failure in strategy is primarily due to widely divergent interpretation of strategy artefacts. In the process of habituation, it leads to a final logical interpretant that may lack stasis; is ambiguous, uncertain, anxious and sometimes antagonistic (Bergman 2009). This antagonism develops and intensifies as strategy narrative forms around the artefacts and is subsequently earned in a hostile environment full of agency

that demands contingency. The success of contingency ultimately depends on the ability of strategy actors to interpret new artefacts and habituate new logical interpretants safely.

7.1.3 Evidence of Clusters

Factor analysis is conducted to identify the clusters of the variables (or items) and how they are inter-related to produce factors. The clusters of variables resulting from this analysis can serve as a reference to further investigate meaning as a strategy discourse (Asnawi, Gravell and Wills 2012). The complexity of semantic space in strategy narrative may be considered as completely arbitrary, but reality points to some "natural" built-in structuring of this space analogous to the gravitational and magnetic determinants of geophysical space. And these physical metaphors are empirical questions, and the logical determinant tool is some variant of factor analysis.

Alternatives to factor and principal component analysis are available to reduce the complexity of the data and attempt to identify homogeneous subgroupings as clusters. This form of extraction is mainly used for clustering people or objects and may be used for clustering items to refine further tests to support hypothesis. These procedures aim to reduce the complexity of the observed data. In the case of factor analysis, the goal is to identify fewer underlying constructs to explain the observed data. In the case of principal component analysis, the goal can be mere data reduction, but the interpretation of components is frequently done in terms like those used when describing the latent variables estimated by factor analysis means (Revelle 2018).

Osgood (1964) suggests that researchers need to take a large and representative sample of qualitative dimensions defined by verbal opposites, determine their intercorrelations when used by subjects in differentiating a representative sample of concepts, and then see if they do fall into "natural" clusters or factors which can serve as a reference. One factor analysis is not enough as it is too liable to the happenstances of sampling. Factor analysis becomes a hypothesis, confirming procedure only when analyses of the same domain are replicated, when the rules of sampling this domain are independent of the factors previously discovered, and when, nevertheless, the same factors keep reappearing. It was this sense of enquiry that led the

investigation towards the possible existence of respondent related clusters exerting some form of influence within the data.

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.126	51.264	51.264	4.303	43.028	43.028
2	1.178	11.781	63.045	2.002	20.017	63.045
3	.982	9.816	72.861			
4	.702	7.020	79.881			
5	.563	5.627	85.508			
6	.448	4.476	89.984			
7	.352	3.522	93.506			
8	.253	2.529	96.035			
9	.219	2.188	98.223			
10	.178	1.777	100.000			

Extraction Method: Principal Component Analysis.

Table 20: Factor Analysis by Respondent Total Variance Matrix

As a form of enquiry, it is recognised that the two main variables in an experiment are the independent and dependent variable. An independent variable is the variable that is changed or controlled in a scientific experiment to test the effects on the dependent variable. A dependent variable is the variable being tested and measured in a scientific experiment. In contrast to the previous test using Factor Analysis by Variance the focus was placed on the Factor Analysis by Respondent to reveal two distinct respondent clusters shown in Figure 36: Factor Analysis Component Plot in Rotated Space by Respondent below. The confirmation of these two clusters confirmed the underlying suggestion of their existence in the Factor Analysis by Variable test at paragraph 7.1.2 Factor Analysis by Variable above.

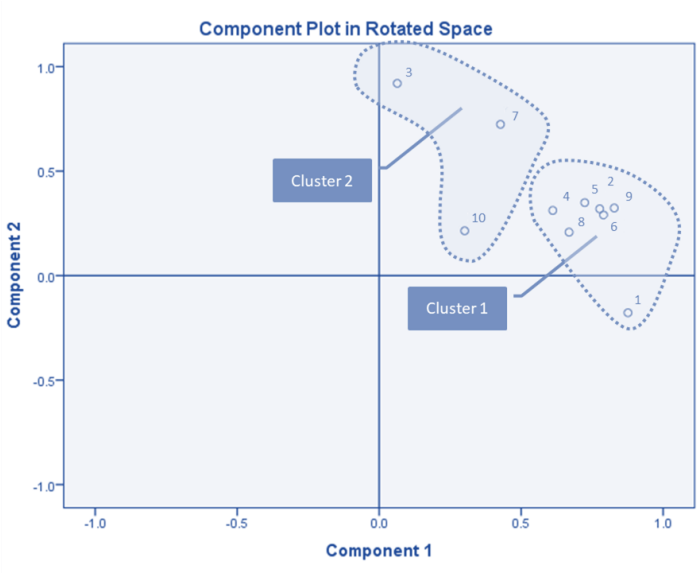


Figure 36: Factor Analysis Component Plot in Rotated Space by Respondent

This analysis resulted in the identification of 2 factors with an eigenvalue that was greater than 1. Both factors accounted for 63.04% of the total cumulative variance; Factor 1 had 43.03; and Factor 2 had 22.02% of the variance see Table 20 above.

7.1.3.1 Factor Analysis for Cluster 1 – The Choir

Data extraction for Cluster 1 identified 6 component factors that accounted for 100% of the total percentage variance as explained in Table 21 below and this cluster accounted for 43.03% of the total cumulative variance see Table 20 above.

. The loadings for each of the significant variables in each of those factors are discussed below.

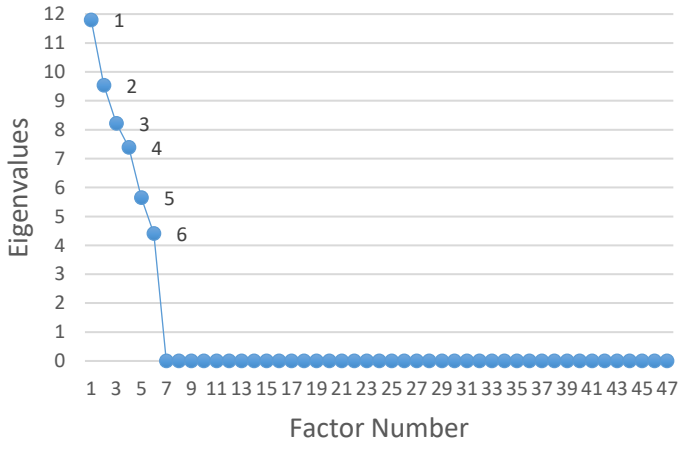


Figure 37: Initial Eigen values shown as a scree plot for Cluster 1.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.797	25.101	25.101	11.797	25.101	25.101	9.690	20.618	20.618
2	9.532	20.282	45.383	9.532	20.282	45.383	8.863	18.857	39.475
3	8.221	17.492	62.874	8.221	17.492	62.874	8.202	17.452	56.927
4	7.388	15.719	78.594	7.388	15.719	78.594	8.147	17.333	74.260
5	5.650	12.022	90.616	5.650	12.022	90.616	7.402	15.750	90.010
6	4.411	9.384	100.000	4.411	9.384	100.000	4.695	9.990	100.000
7	5.441E-15	1.158E-14	100.000						

Table 21: Factor Analysis by Cluster 1 Total Variance Matrix

Rotated Component Matrix

Var	1	Var	2	Var	3	Var	4	Var	5	Var	6
V1	-0.837	V1	0.270	V1	-0.371	V2	-0.458	V4	0.364	V4	0.414
V2	-0.839	V7	0.376	V8	-0.977	V3	-0.500	V6	-0.529	V7	0.660
V3	-0.831	V11	-0.428	V9	-0.288	V5	-0.965	V7	-0.590	V11	0.368
V4	-0.821	V12	0.687	V10	-0.653	V6	0.772	V9	0.496	V12	0.252
V9	-0.793	V13	-0.329	V11	0.634	V10	0.545	V10	0.298	V13	0.720
V10	-0.400	V15	-0.523	V12	0.315	V13	0.610	V11	0.300	V15	0.305
V11	-0.374	V17	-0.341	V15	-0.505	V14	-0.359	V14	0.931	V18	-0.722
V12	-0.575	V18	-0.415	V16	-0.743	V16	0.387	V15	-0.557	V20	-0.516
V16	0.518	V19	0.290	V17	0.498	V19	-0.859	V17	0.432	V23	0.436
V17	-0.651	V20	-0.252	V18	0.271	V20	0.499	V23	-0.397	V26	-0.494
V18	-0.423	V21	-0.412	V19	-0.273	V21	-0.506	V26	-0.686	V31	-0.300
V20	0.444	V22	-0.620	V20	-0.471	V22	0.557	V27	0.825	V33	-0.902
V22	0.392	V23	-0.455	V21	-0.712	V23	0.555	V32	0.835	V34	-0.381
V26	0.296	V24	0.560	V22	-0.343	V24	0.815	V34	-0.736	V36	0.329
V28	0.592	V25	0.949	V23	-0.361	V26	0.299	V36	-0.709	V41	0.259
V29	0.785	V27	-0.339	V25	-0.270	V28	-0.277	V40	-0.464	V45	-0.304
V31	0.510	V28	0.744	V26	0.287	V29	-0.359	V43	0.425	V47	-0.554
V32	0.426	V29	-0.458	V27	0.447	V30	0.336	V44	-0.812		
V36	0.405	V30	0.910	V35	0.970	V31	0.277	V46	0.356		
V37	0.499	V31	-0.721	V37	0.782	V33	0.302				
V39	0.896	V32	0.337	V38	0.261	V34	-0.444				
V43	0.722	V34	0.312	V39	-0.286	V36	-0.296				
V44	0.459	V36	0.372	V40	0.425	V39	-0.310				
V45	0.304	V38	0.903	V43	-0.369	V42	0.972				
V46	-0.715	V40	0.750	V45	0.728	V43	-0.395				
		V41	-0.922	V46	0.522	V45	0.371				
		V45	-0.346	V47	0.729	V47	-0.335				

Table 22: Factor Analysis by Cluster 1 Rotated Component Matrix

7.1.3.1.1 Factor 1 – Doubting

Overall this factor accounts for 20.62% of the total percentage of variance in Cluster 1 and therefore needs to be considered as a fairly significant dynamic in the way that this Cluster is interpreting the Strategy narrative.

Figure 38: Cluster 1 Factor 1 – Firstness

Group doubting and lack of confidence in the way artefacts that strategy is based upon are presented are questioned. There may be some spatial distance between some participants and the development of strategy, and this begs the question: Was this a strategy developed by a few key stakeholders? According to Peirce, Firstness is emotional in terms of a sensation without knowing where it comes from (Peirce 1931). Respondents seem to be unable to embody the signs extant in the artefacts in the strategy. Lighter loadings seem to suggest the relevance of strategy is understood, but the signs adopted in the strategy narrative perhaps lack interpretation in a way intended.

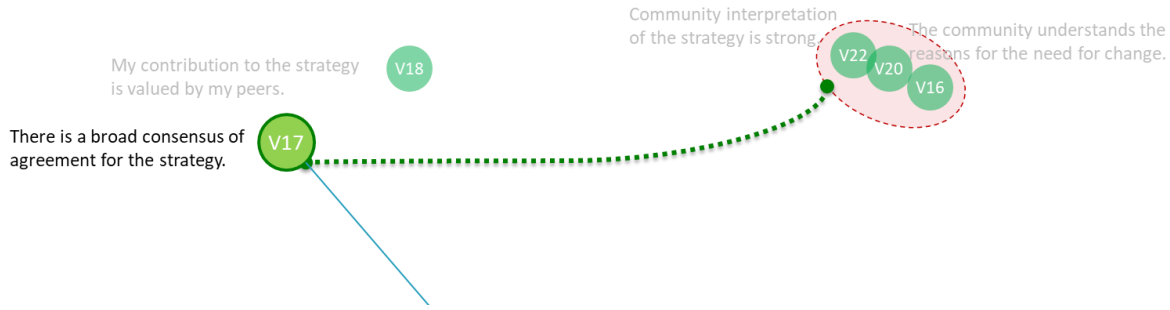


Figure 39: Cluster 1 Factor 1 – Secondness

The group may be having difficulty trying to interpret the past (icons) presumptions into context of the present. The indexical nature of Secondness may be making it difficult for participants to understand the spatial connectedness between the two actualities. This difficulty will have consequences for intended habituation of practice in achieving desired outcomes.

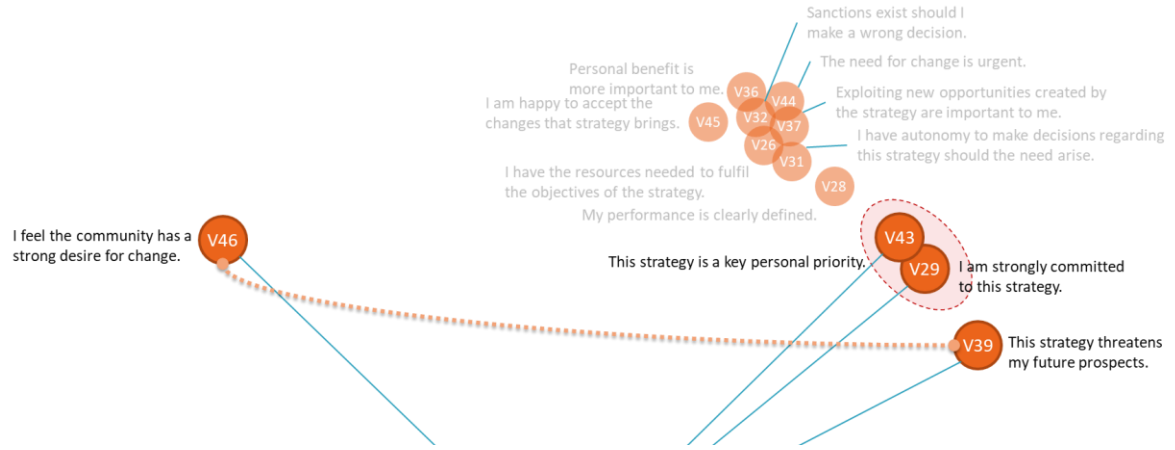


Figure 40: Cluster 1 Factor 1 – Thirdness

The lack of spatial connectedness may appear to confirm the individual commitment to strategy, consequently strategy is being interpreted as threatening. However, this is not a shared perspective and there seems to be an interpretation that there is a lack of desire for change in others. Habituation exists at an individual level but would appear to not exist at a community level. This lack of community habituation may suggest an absence of team spirit within the strategy community.

Strong levels of doubt in the clarity of the strategy narrative will allow actors to question their obligation to it. This appears to be confirmed by strong factor loading that suggests that there is a low preconception of utility in the strategy artefacts to an extent that actors are disinclined to align themselves to the strategy narrative. And it cannot be a surprise that this lack of alignment is being perceived as threatening on a personal basis, therefore there is a lack of obligation to do so on the basis that the strategy narrative lacks clarity.

There may be a strong personal commitment and alignment to the strategy narrative, however it is being perceived as threatening to future personal prospects. This may be driven by some doubt regarding belief in the strategy story and the community's desire to enact change on the basis of the current strategy narrative.

7.1.3.1.1.1 Summary - Doubting

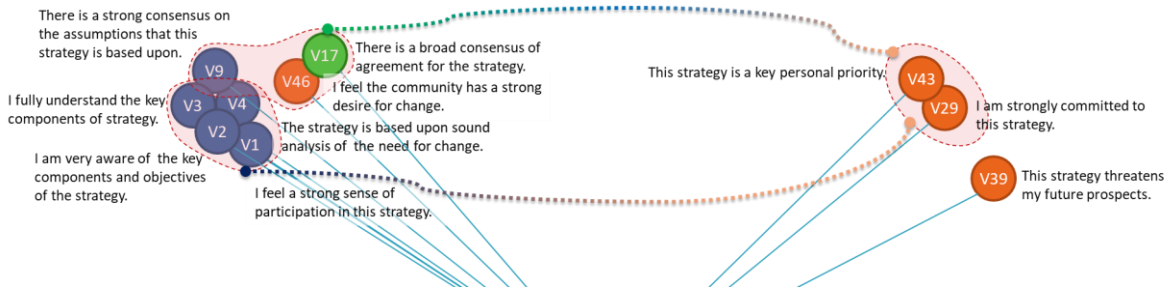


Figure 41: Cluster 1 Factor 1

The need for participation in strategy exists, but only at a personal level. The lack of consensus in what the strategy artefacts represent is being interpreted widely across the community and leads actors to question the veracity of those artefacts and therefore fearful of likely outcomes.

In terms of firstness the group have some spatial distance between artefacts and their interpretation. Strong negative loadings suggest that this cluster exhibits a lack of consensus in understanding strategy artefacts and may therefore feel a sense of alienation from the strategy narrative. 'Shadow' variables with lower factor loadings suggest that some may well understand the relevance of strategy but may be undermined by the lack of participation in the forming of strategy. There may be a sense that this broad interpretation in the Cluster may be due to some other external influence on the Cluster. In an emotional sense, lower factor loadings in secondness variables suggest a lack of consensus and perhaps a perception that contribution is not valued. This would appear to be underscored by low positive factor loadings that suggest a lack of community in the interpretation and understanding of strategy artefacts.

7.1.3.1.2 Factor 2 – Spatial Relevance Weak

The sum percentage variance for this factor is an 18.86% weighting on the way strategy narrative is being interpreted within this cluster.

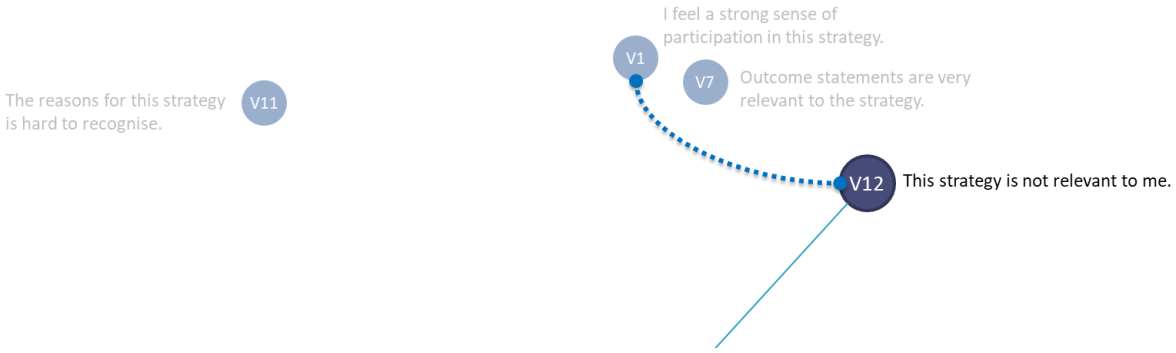


Figure 42: Cluster 1 Factor 2 – Firstness

In terms of Firstness the sinsign trichotomy suggests an agnostic position on strategy on the basis of unsound situation analysis. This may lead actors to believe that the strategy lacks relevance to them. Although there is a weak factor loading regarding the reasons for strategy there is a stronger factor loading pulling towards a rejection of the relevance of strategy at an individual level. It may be that strategy is not being monitored in terms of evaluation and control of strategy focussed on key performance questions and KPI's that are relevant to the fulfilment of objectives.

There is an instinctive recognition of the artefacts in the strategy narrative, but there is a low-level sense of curiosity and therefore engagement that may question the relevance of part of the story. In relative terms actors in the community may be doubting the level of involvement in the development of the strategy and this may undermine their confidence in interpreting the components of strategy. Perhaps low levels of involvement and a more significant perception that the strategy narrative is not relevant to actors in strategy are contributing to the level of doubt that exists through the lens of a fair degree of agnosticism. This seems to resonate with a perception that there is a lack of consensus in the strategy narrative and seems to be generating some sense of partiality.

Figure 43: Cluster 1 Factor 2 – Secondness

There is some rapport with the existing knowledge base, but it is weak. This weakness may be born out of a sense of individual isolation and ambiguity regarding the strategic intent. This is confirmed by stronger factor loadings for the lack of consensus in the interpretation of strategy that may lead to individual tergiversation. It could be that strategy storytelling and narrative is not consistent.

Although aware of the strategy artefacts there appears to be low level of confidence in how to interpret their meaning. This would appear to be interpreted as strategy lacking relevance exhibited by a fairly strong sense of spatial distance and disengagement from the strategy narrative. Not surprisingly, the quality of the artefacts and the way they are being interpreted is being questioned leading to agnosticism.

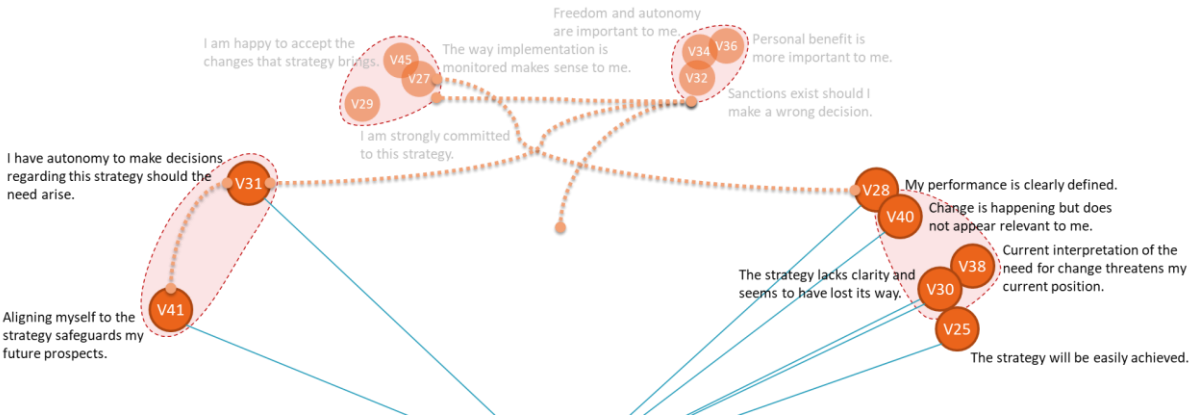


Figure 44: Cluster 1 Factor 2 – Thirdness

While participants may feel that the strategy will be 'easy' to achieve there seems to be some underlying doubt about their authority and autonomy to do so. Indeed, if actors feel that they lack autonomy then it should be no surprise that they are not disposed to aligning themselves to the strategy.

The need for change is hardly questioned in this component, but the means by which it may be achieved is being questioned. Although actors may see the relevance of strategy, the narrative it is generating is being perceived with low level scepticism.

7.1.3.1.2.1 Summary – Spatial Relevance

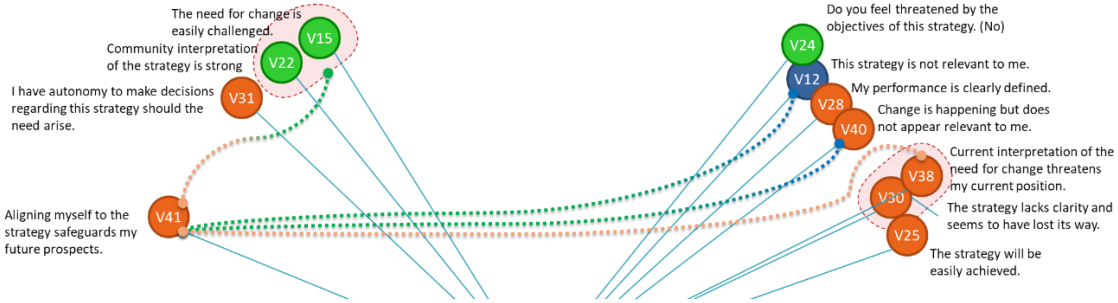


Figure 45: Cluster 1 Factor 2

Questioning the relevance of strategy in the first trichotomy may suggest a lack of involvement in the development of strategy. If strategy builders want to gain participant buy-in to strategy by those involved in implementation, then implementers need to be involved closely with the building of strategy and the means by which progress will be monitored and evaluated.

The process of negotiation was defined by Peirce as habituation, the means by which actors 'connect' the symbol with the object (Chandler 2007) , where Chandler (2007) has a notion of the degeneracy of signs (West and Anderson 2016). Bergman's (2009) interpretation of Peircean logic argues that the first logical interpretant is defined as conjecture; which establishes a habit that enables imaginary experimentation; driven by various motives such as prejudice, bias, chauvinism and discrimination; as actors in strategy gradually refine our own logical final interpretant.

The final interpretant is an ideal and ideals can lose dominion if challenged by enquiry and/or new stimuli. This form of semiotic idealism may be referred to as habituation. Strategy discourse in the community provides a way to seek out a resolution to our dissonance through experimentation of different perspectives. When actors are close to exhausting the experiential process through interpretation and rationalisation, then actors may move closer to taking a position.

The final logical interpretant of strategy builders seems to be adrift from general consensus. This could lead to followers of strategy with a feeling that either some key strategy artefacts lack transparency; or there is a genuine inability to interpret those artefacts. Either way, it would appear that some actors may not actually trust strategy and are therefore unwilling to align themselves to it.

There appears to be a fair degree of equivocation on the interpretation of the strategy narrative; and personal interpretation of strategy artefacts and the likely personal impact is generating considerable anxiety for some in the strategy community.

There is a strong perception that the strategy narrative is limiting individual sovereignty, given that there is a recognition that autonomy is important to some in the respondent base this may suggest that there may be a lack of recognition of this in the langue (the linguistic system shared by the members of a community (Chandler 2007)) of the strategy narrative. There is a moderate factor loading that suggests some level of discretion is exercised. There is some constraint in how that can be exercised. This weakness in self-determination may be interpreted as strategy having a lack of relevance and safeguarding future prospects; as the low negative loadings may suggest.

7.1.3.1.3 Factor 3 – Fluid Habituation

This factor accounts for 17.45% of the total percentage variance and may be considered a considerable contributor to the way the strategy narrative is currently interpreted.

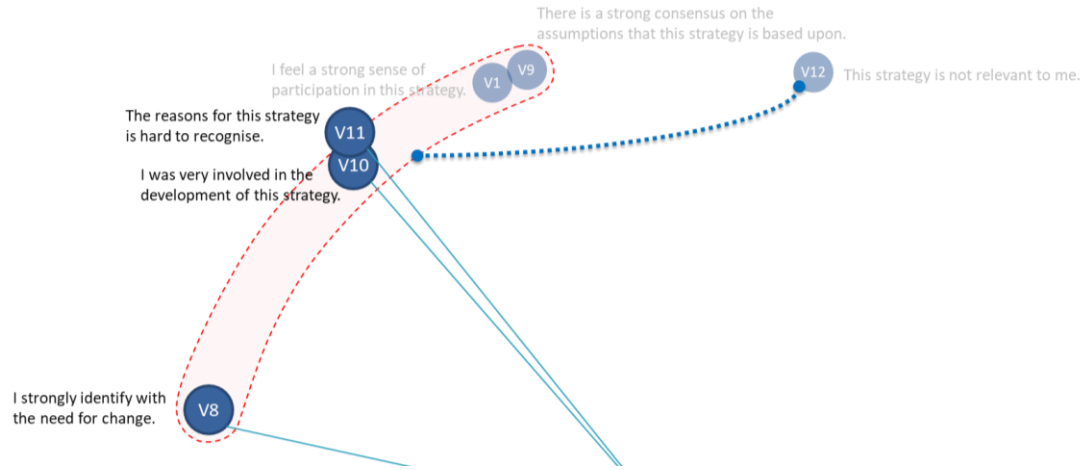


Figure 46: Cluster 1 Factor 3 – Firstness

There seems to be a lack of connection to the artefact in strategy and this may be due to the moderately high factor loadings on the perception that respondents felt that they were not involved in the development of strategy. Spatial distance exists in the participation of strategy. This spatial distance may have led to a sense of isolation and therefore difficulty in forming consensus around the artefacts.

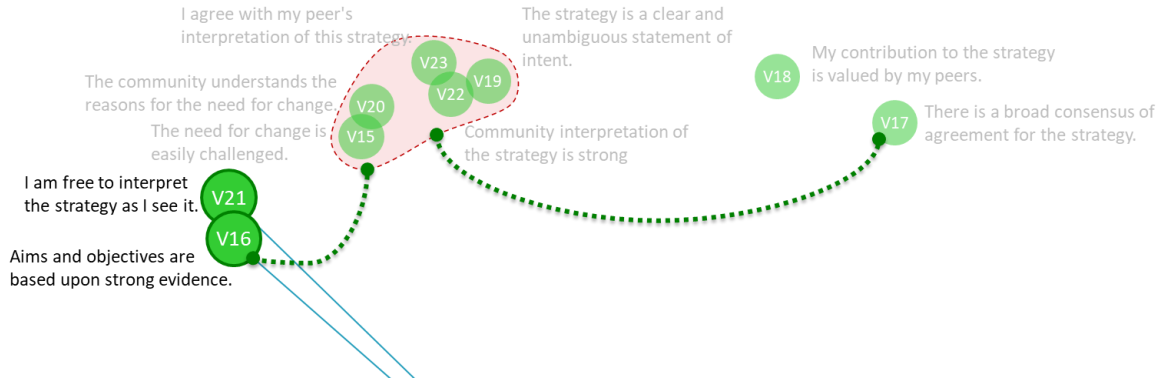


Figure 47: Cluster 1 Factor 3 – Secondness

Peirce states that the interpretation of the object is dyadic in nature to the representamen and is therefore iconic (Cobley 2010). The commonality of factor loadings in this component suggests that artefacts lack understanding, and this is leading to a perception of sectarianism and isolation.

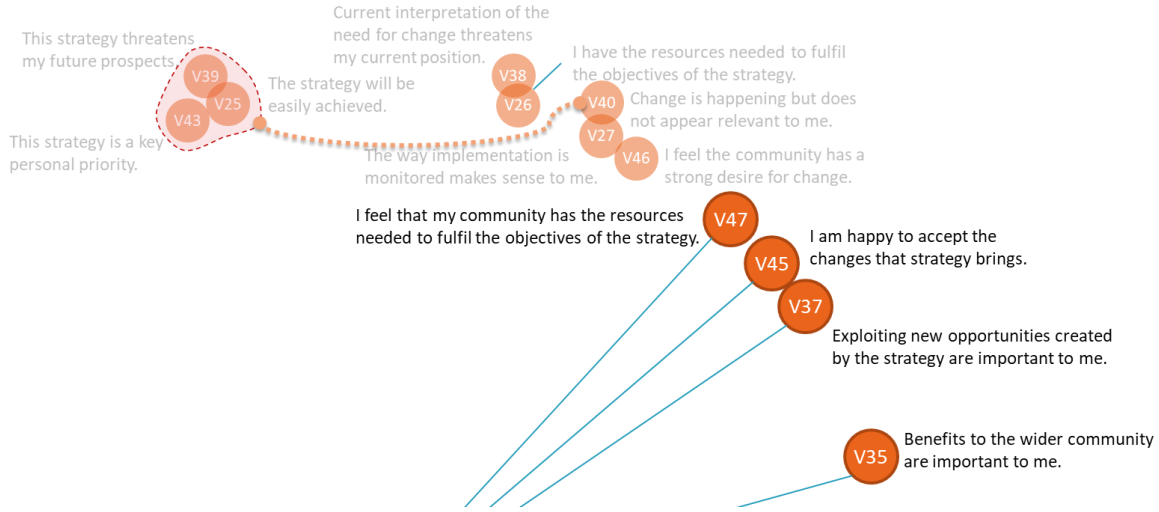


Figure 48: Cluster 1 Factor 3 – Thirdness

The mediators through which the representamen and the object are rendered in relation to the interpretant suggest there is a strong application of knowledge, corresponding to intellectual experience and the application of rules, laws, and grammar of strategy artefacts. That argument is

weakened somewhat by the act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object in the context of personal priority and achievement.

7.1.3.1.3.1 Summary – Fluid Habituation

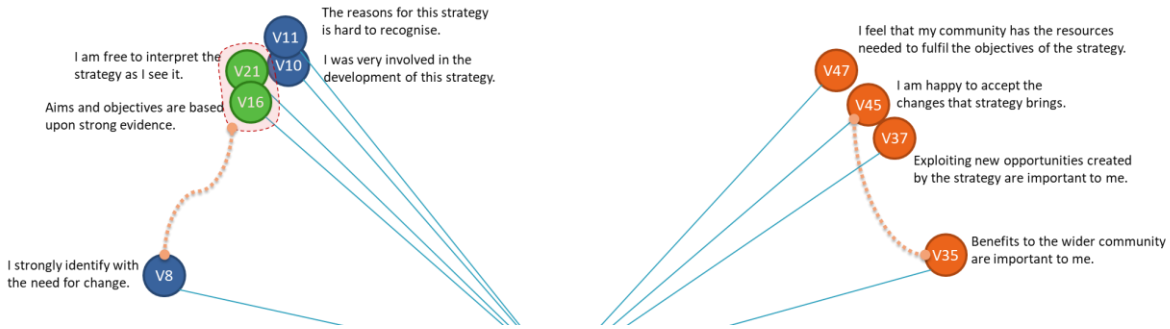


Figure 49: Cluster 1 Factor 3

This spatial distance may have led to a sense of isolation and therefore difficulty in forming consensus around the artefacts. The commonality of factor loadings in this component suggests that artefacts lack understanding, and this is leading to a perception of sectarianism and isolation. The mediators through which the representamen and the object are rendered in relation to the interpretant suggest there is a strong application of knowledge, corresponding to intellectual experience and the application of rules, laws, and grammar of strategy artefacts; however, the interpretation of this factor may be defined as a form of fluid habituation in that actors are trying to achieve consensus in interpretation but perhaps the lack of community contradicts this effort (Bergman 2009). Significance of factor loadings relating to a lack of latitude and freedom are not based upon close dialogue in the formation of strategy.

7.1.3.1.4 Factor 4 - Estrangement

This factor accounts for 17.33% of the total percentage variance and may be considered a considerable contributor to the way the strategy narrative is currently interpreted.

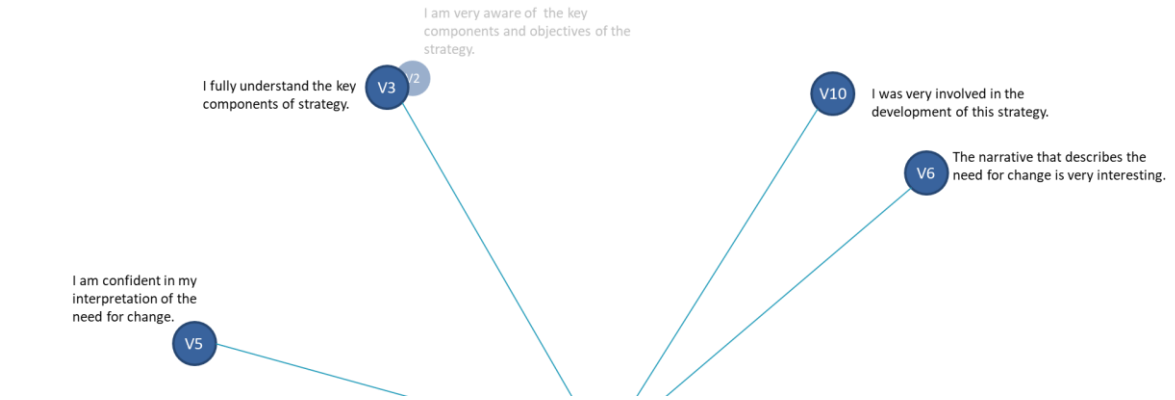


Figure 50: Cluster 1 Factor 4 - Firstness

There may be considerable partiality in the narrative on the need for change within the strategy group. This appears to be underpinned by some ambiguity regarding strategic intent on the face of the evidence extant at the time. Peirce states that qualsign is a quality of the representamen that functions like a sign but cannot act like a sign until it is embodied (Short 2007) . It may be this inability to embody the sign that contributes to this degree of tergiversation, repudiation, estrangement or apostacy with strategy artefacts within the strategy narrative.

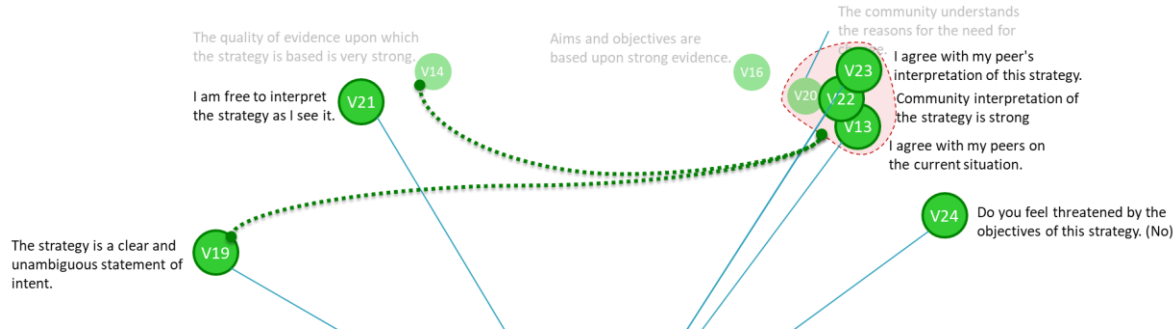


Figure 51: Cluster 1 Factor 4 - Secondness

The degree of tergiversation in the former (Firstness) may give rise to group think in the latter (Secondness) and therefore a sense of ambiguous interpretation on a personal level. The symbolic nature of the strategy as an object suggests a degree of closeness in interpretation, however this is being pulled by a weaker negative loading regarding the quality of the evidence upon which the strategy is based; and a much stronger negative factor loading on ambiguity in the narrative on the statements of intent.

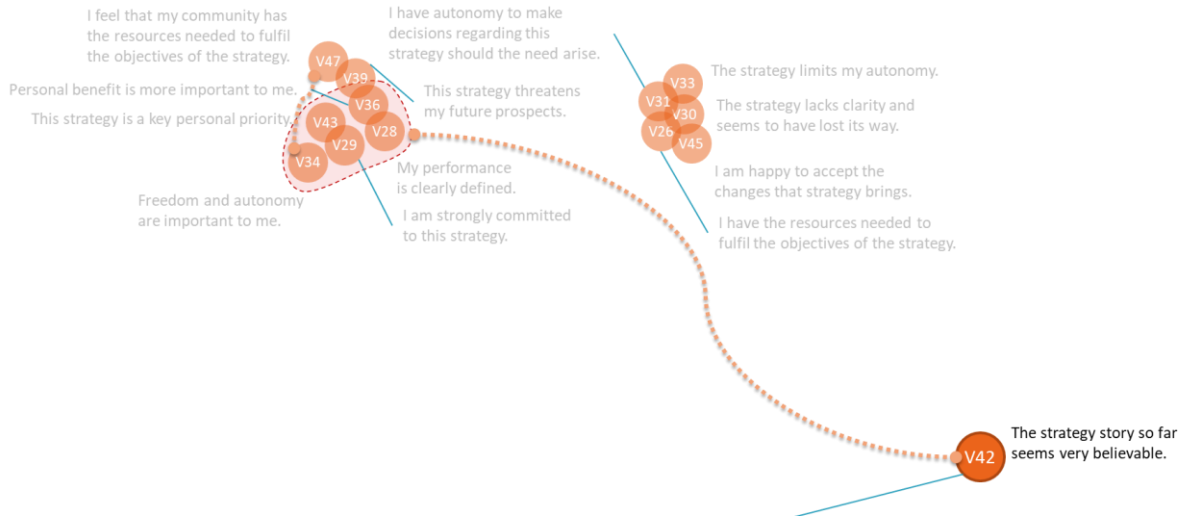


Figure 52: Cluster 1 Factor 4 - Thirdness

The strategy story may be very believable, however the shadow variables that exhibit weaker factor loadings may suggest a significant lack of conformity to strategy in terms of personal priority. This in itself may be impacted by questions relating to a capacity for change.

7.1.3.1.4.1 Summary – Estrangement

Figure 53: Cluster 1 Factor 4

There appears to be a fairly strong sense of conformity at a community level, however negative factor loading suggests that this is considerably weakened by those factor loadings at an individual level that indicates some form of partiality; a lack of understanding; and the perception of a lack of independent authority within the strategy implementer's domain.

7.1.3.1.5 Factor 5 - Valence

This factor accounts for 15.75% of the total percentage variance and may be considered a considerable contributor to the way the strategy narrative is currently interpreted.

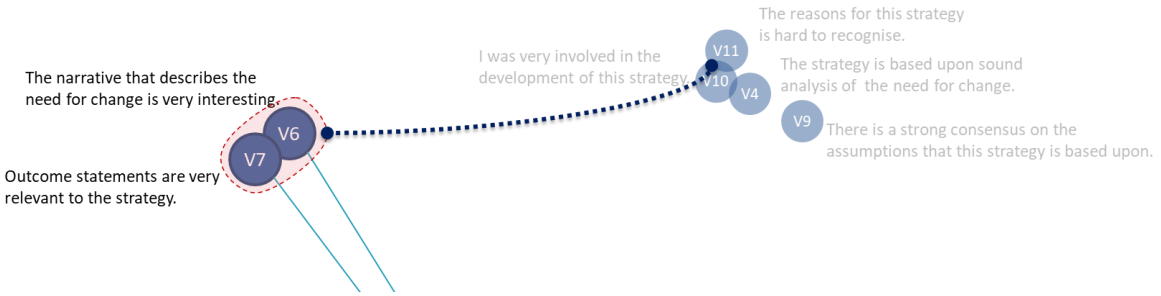


Figure 54: Cluster 1 Factor 5 – Firstness

Artefacts that may be rendered as qualsigns that may function like a sign but cannot act like a sign until embodied (Chandler 2007; Short 2007) may indicate strategic drift. This apparent lack of Firstness suggest a fairly wide held belief that many of the strategy artefacts lack a common articulation and interpretation as to their meaning to the strategy context. This may lead some to question the relevance of the strategy and therefore their interest in it may wane.

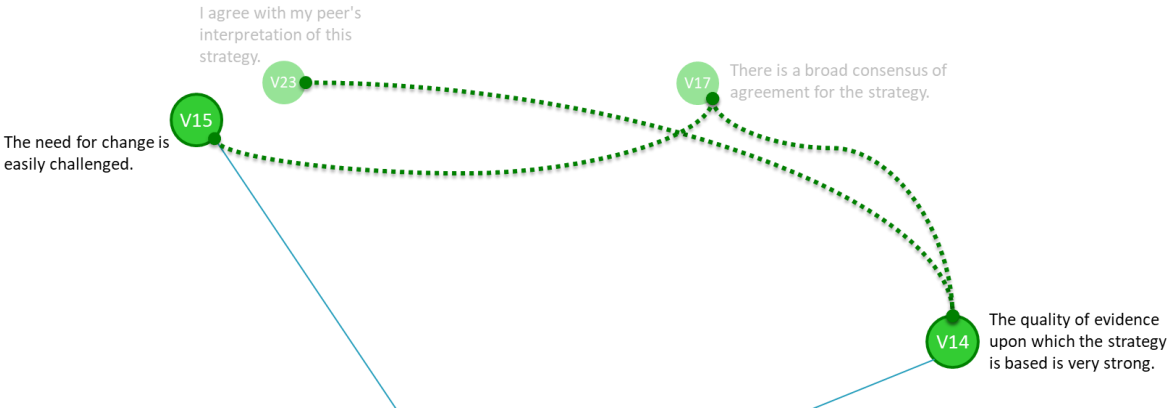


Figure 55: Cluster 1 Factor 5 – Secondness

While individual interpretation of artefacts may appear to be strong, the strategy builders of strategy implementer's interpretation is not so convincing; in an environment where there may be some resistance to challenge conventional wisdom.

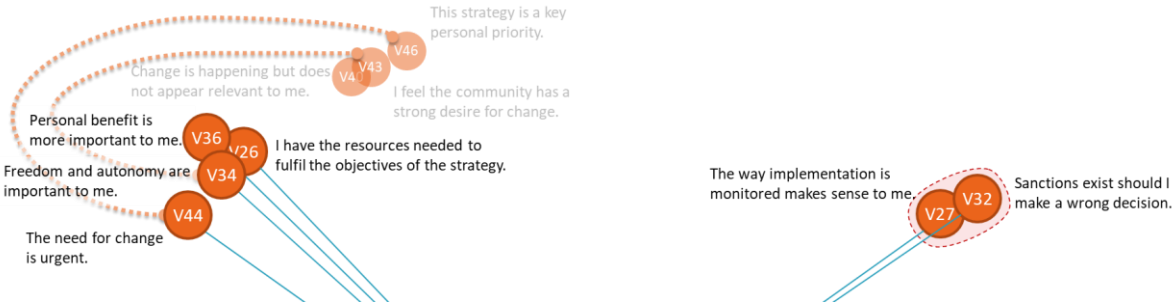


Figure 56: Cluster 1 Factor 5 – Thirdness

A quality of the interpretant is that it acts as a mediator through which the first and second are brought into relation through the application of knowledge corresponding to past experience (Short 2007). Therefore, habituation has determined negative factor loadings that suggest there is a resistance to change. This may be communicating a reluctance to participate in strategy and brings into question the degree of valence at a personal level to affect the direction of the strategy narrative.

7.1.3.1.5.1 Summary – Valence

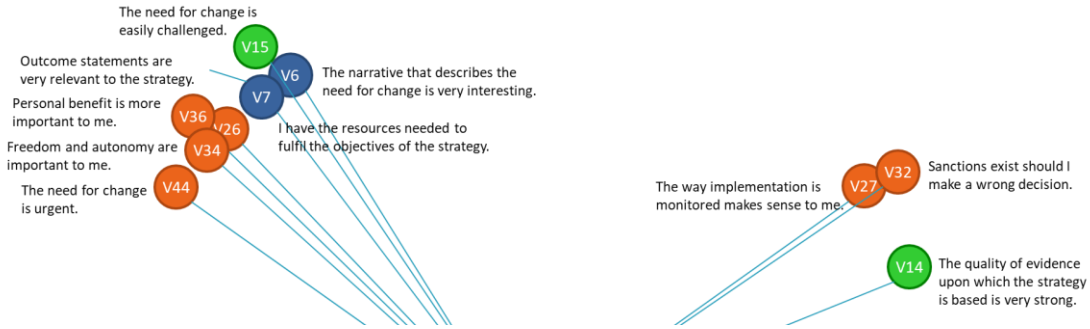


Figure 57: Cluster 1 Factor 5

The lack of participation in the strategy narrative may point to strategic drift. There is a strong individual interpretation of artefacts that does not translate into a consensus interpretation and this will undermine team effort as players play the game in isolation of others. This reluctance to participate as a team means that individuals habituate strategy differently and are therefore reluctant to commit themselves to do more than to maintain a steady course in their individual domain. It is not surprising for strategy stakeholders to have goals (and hence desired outcomes) which are different from strategy goals. After all, stakeholders' decision making is made in the context of sub-unit goals and personal goals rather than strategy goals, while stakeholders pursue overall organisational goals (and personal goals) (Guth and MacMillan. 1986). In the case of stakeholder valence on outcomes, strategy builders are obliged to find ways of either increasing the valence of their strategy by inducement and persuasion) or reducing the valence of operational stakeholders' alternatives by coercion and obligation.

7.1.3.1.6 Factor 6 – Syntactic Compound.

This factor accounts for 9.99% of the total percentage variance and may be considered a considerable contributor to the way the strategy narrative is currently interpreted.

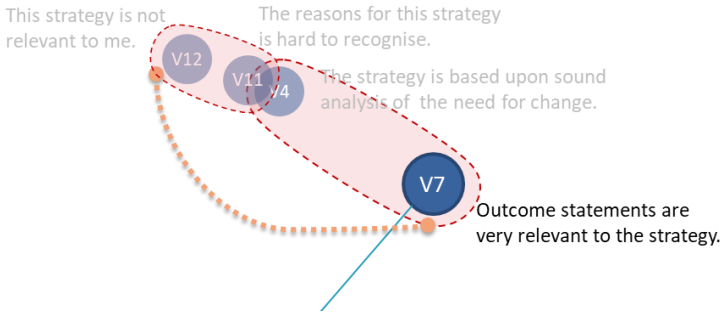


Figure 58: Cluster 1 Factor 6 – Firstness

As a qualsign there is some sense making of artefacts that are being embodied as signs in a way that was perhaps expected by the strategy architects. The problem with the representamen is that this newfound interpretation does not fit strategy actor's world view of the strategy. This disparity may lead some to simply reject elements of the strategy as not relevant to them; and this is being justified by their perception of ambiguity. The problem for strategy is that actors in strategy may pick and choose those elements that lack relevance to them on the basis of personal bias.

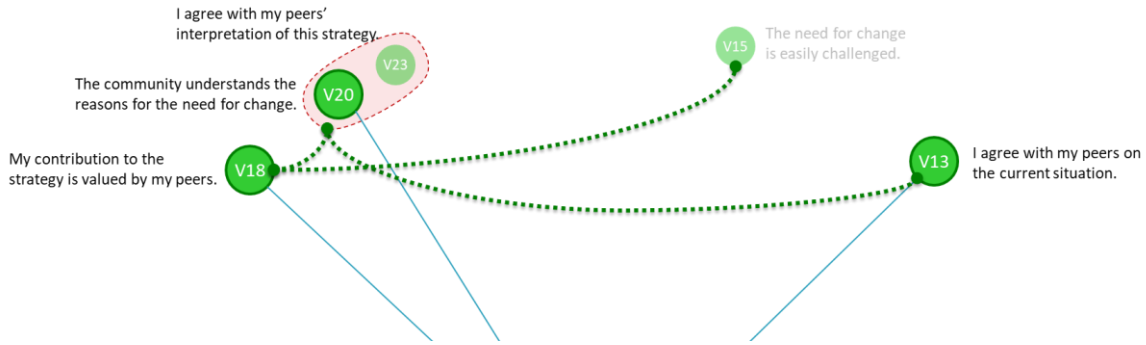


Figure 59: Cluster 1 Factor 6 – Secondness

Factor loadings suggest that this component is not iconic in the context of firstness. Therefore this lack of iconography in the representamen makes it difficult for interpretants to relay the past into the present in the way that perhaps strategy authors had intended and the dyadic nature of interpretation is lost in a spacio-temporal sense and has become indexical in a way that those authors had not intended (Short 2007). This inability to define a relationship will lead to a feeling

of isolation and partiality; and participants will begin to question their own contribution and that of others as they struggle with conventional syntax within the strategy.

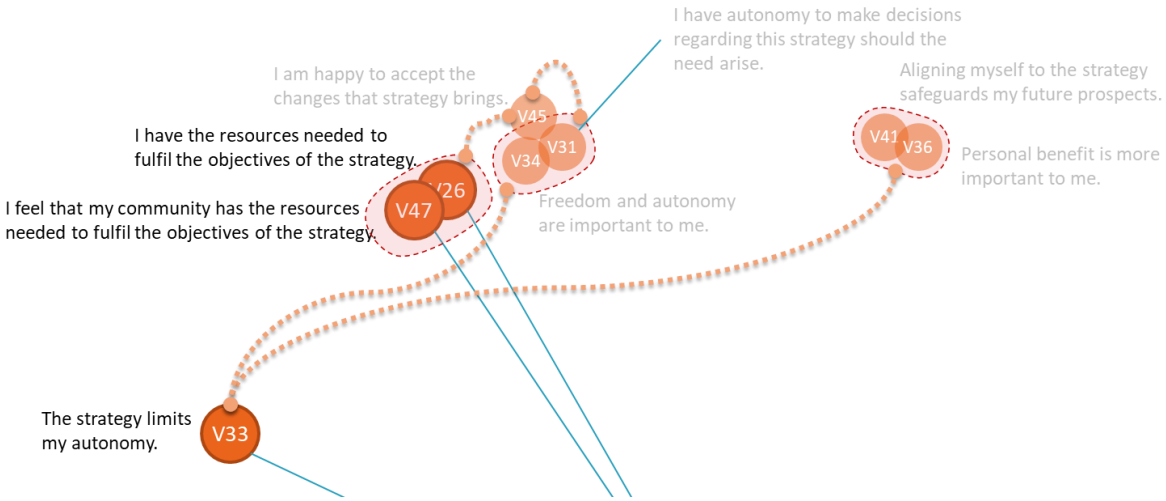


Figure 60: Cluster 1 Factor 6 – Thirdness

As participants struggle with the syntax of interpretation this factor calls into question the strategic orthodoxy. This sense of doubting may force some participants to perhaps argue about the question of resources required to achieve strategy outcomes; argument is the act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object. The resulting semiotic may be both, rheme like in that it can be an icon, index or symbol bringing something to one's attention; and a dicisign that is Indexical in nature related to the object it portrays throwing up ambiguity by habituating strategy actor's own related-ness to strategy.

7.1.3.1.6.1 Summary – Syntactic Compound

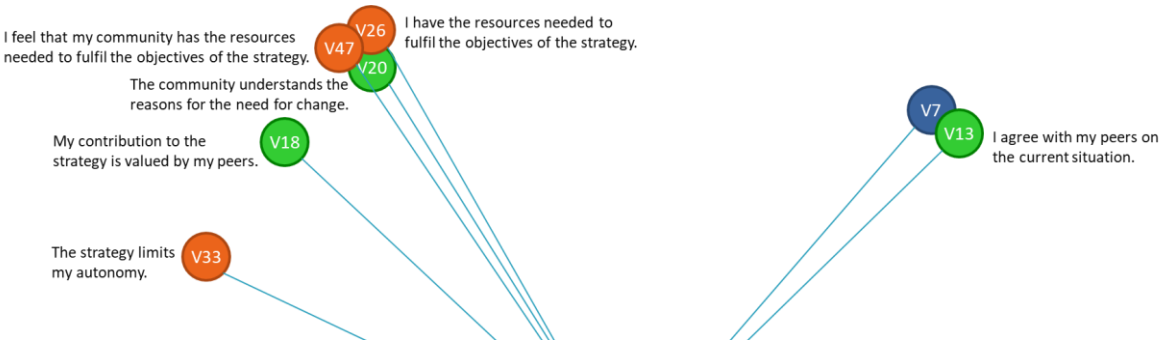


Figure 61: Cluster 1 Factor 6

Participants struggling with the syntax of interpretation calls into question the strategic orthodoxy. This inability to define a relationship may lead to a feeling of isolation and partiality;

and participants will begin to question their own contribution and that of others as they struggle with conventional syntax within the strategy. The factor loadings in this component tend to suggest that individually peers feel they understand the current situation; however, the negative factor loadings may leave one to conclude that the strategy does not fit their interpretive assessment and that the resources required to deal with that reality are not available. There may be a suggestion of sense making taking place where symbols are being created to justify a position. Nobre (2019) recognises the social constructivist perspective within organisations, which are viewed as social constructs, is also relevant to organisational semiotics. As discussed in 7.1.2.77.1.2.7 above, information is a central concept that may be analysed through diverse perspectives and semiotics offers a framework which allows us to interpret information at syntactic, semantic, pragmatic and social levels. Syntax deals with signs without regard to their meaning; semantics deals with the signification of signs in all modes of signifying; pragmatics deals with the origin, uses and effects of signs within the behaviour in which they occur.

Participants suggest that the pursuit of personal benefit is strong, and this may be driving the high factor loading on their interpretation of the strategy narrative as defining that the need for change is urgent. This will undermine the synchronous institute of the strategy as the narrative is being used for personal ambition. As Nobre (2019) relates, this may lead to execration (curse and condemnation) and commination (denunciation and malediction) to undermine the relevance of the strategy narrative (gospel). Driven by doubt regarding the community desire for change; and fear of personal consequences.

7.1.3.2 Factor Analysis for Cluster 2 – The Clerics

Data extraction for Cluster 2 identified 2 component factors that accounted for 100% of the total percentage variance as explained in Table 23 below and this cluster accounted for 20.02% of the total cumulative variance see Table 20 above.

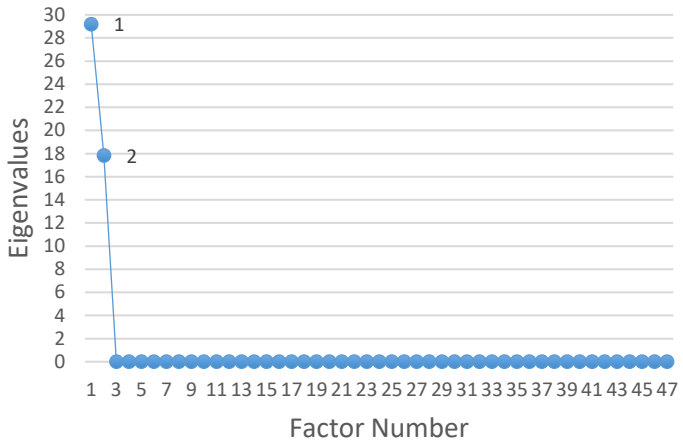


Figure 62: Initial Eigen values shown as a scree plot for Cluster 2.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	29.186	62.098	62.098	29.186	62.098	62.098	25.036	53.269	53.269
2	17.814	37.902	100.000	17.814	37.902	100.000	21.964	46.731	100.000
3	4.842E-15	1.030E-14	100.000						

Table 23: Factor Analysis by Cluster 2 Rotated Component Matrix

Rotated Component Matrix

Var	1	Var	1
V2	0.778	V28	-0.968
V3	0.988	V30	0.360
V4	-0.883	V31	-0.360
V5	-0.360	V32	-0.988
V7	0.574	V33	-0.883
V9	0.778	V34	0.778
V10	0.933	V35	0.267
V11	0.968	V36	-0.741
V12	-0.848	V37	-0.988
V13	-0.360	V38	-0.952
V14	0.360	V39	-0.988
V15	0.933	V40	0.883
V16	0.360	V41	0.988
V17	0.646	V42	-0.988
V18	0.988	V43	0.968
V20	0.988	V44	-0.845
V23	0.988	V45	-0.360
V24	-0.959	V46	0.360
V25	-0.984	V47	0.338
V26	0.796		

Var	2	Var	2
V1	-0.988	V24	-0.284
V2	0.628	V26	-0.605
V4	-0.469	V27	0.988
V5	-0.933	V28	0.251
V6	0.999	V29	-0.972
V7	0.819	V30	0.933
V8	-0.988	V31	-0.933
V9	0.628	V33	-0.469
V10	0.360	V34	0.628
V11	-0.251	V35	-0.964
V12	0.530	V36	0.671
V13	-0.933	V38	-0.306
V14	0.933	V40	0.469
V15	-0.360	V43	-0.251
V16	0.933	V44	-0.534
V17	0.764	V45	-0.933
V19	0.999	V46	0.933
V21	-0.992	V47	-0.941
V22	0.992		

Figure 63: Factor Analysis by Cluster 2 Rotated Component Matrix

7.1.3.2.1 Factor 1 – Conviction

This factor accounts for 53.27% of the total percentage of variance in Cluster 2 and therefore needs to be considered as a significant dynamic in the way that this Cluster is interpreting strategy narrative variables.

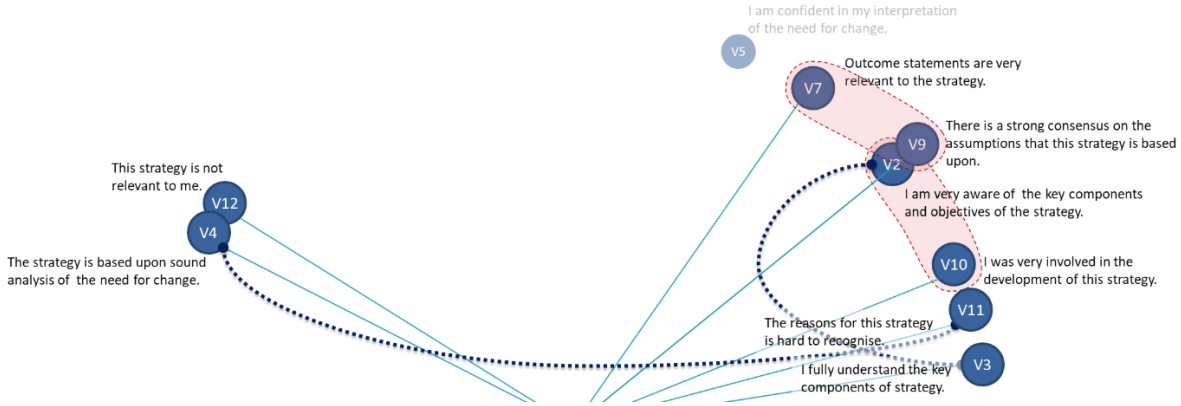


Figure 64: Cluster 2 Factor 1 – Firstness

The strong factor loadings suggest a closeness to the development of strategy and a strong belief in the interpretation of strategy artefacts that lead to a consensus. That said, this is underscored by a strong factor result regarding the reasons for strategy being hard to recognise as a Qualsign – this function like a sinsign becoming disembodied by the passage of time in a spacio-temporal sense that loses shape as a sign.

There appears to be a very strong recognition of artefacts and involvement in the development of the strategy narrative. However, that recognition is not shared regarding the analysis and interpretation of the need for change and the reasons for the strategy are hard to recognise; that seems to lead to considerable doubt on the personal relevance of the strategy narrative.

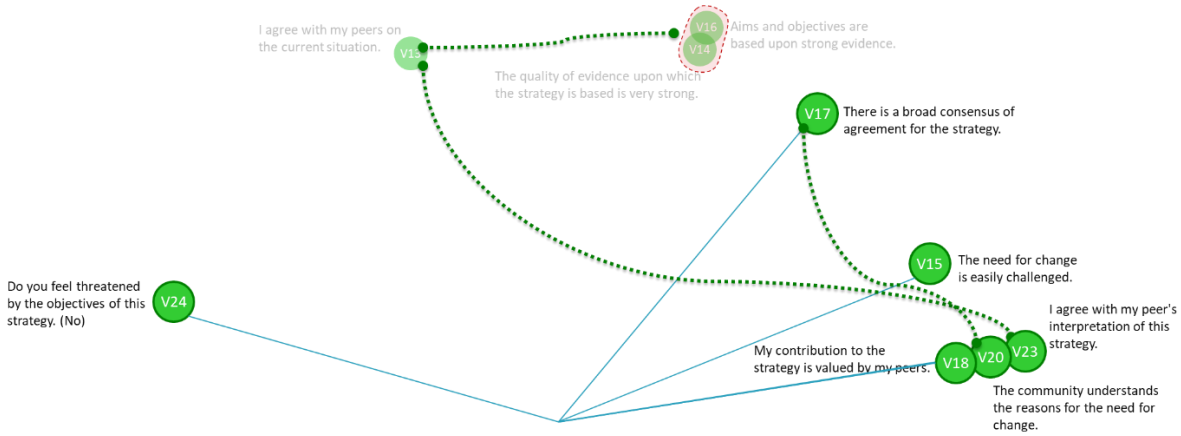


Figure 65: Cluster 2 Factor 1 – Secondness

There is strong rapport and perceived contribution in strategy and therefore awareness of artefacts and assumptions on an indexical level, however spatial connections seem a little compromised by perception of group participation that may question the interpretation of aims and objectives. This doubting may be due to the advent of spatial distance in time from the

moment strategy was ‘formed’ as there is a sub-text narrative that questions the relevance of the current situation. Interpretation of strategy artefacts may be strong, but their freedom to interpret the resultant strategy isn’t. Analysis of this cluster suggests that the strategy narrative objectives are based upon strong evidence as is the community interpretation of them.

Strong recognition of contribution to the strategy is valued by fellow peers and the community understands the reasons for the need for change on the basis their peers’ interpretation of the strategy narrative; and are under no obligation to feel threatened by the objectives of this strategy. Therefore, community accord is reasonably strong. Something that is not shared by Cluster 1.

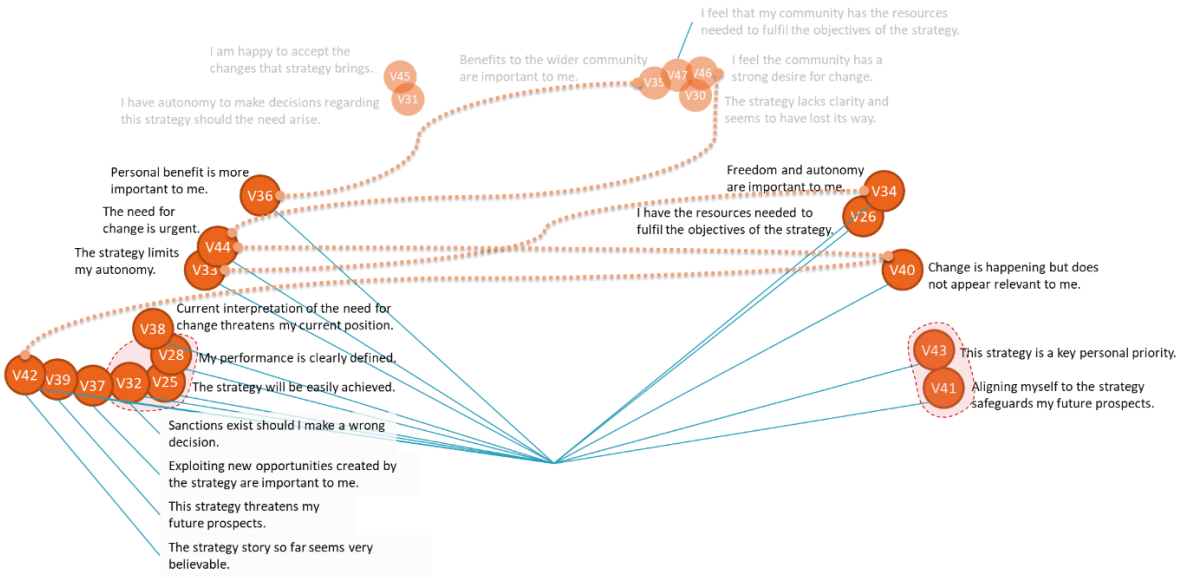


Figure 66: Cluster 2 Factor 1 – Thirdness

This cluster appears to be operating on a dynamic that suggests a relatedness and a sense of strong habituation to construction of strategy. There is a strong sense of community wellbeing and participation that respondents in this cluster have towards others. However there appears to be a disconnect that may be questioning the currency of strategy and that that communication coming from strategy is perhaps not believable. Currency of strategy is questioned by storytelling and narrative perhaps habituating as a lack of urgency that may be habituated as a resistance to change.

There is a strong energy in this group in realising new opportunities that the strategy narrative may afford. That story is based upon a sound belief that stated outcomes will be easily achieved through clearly defined performance controls in a strong recognition that the need for change is urgent. That said, the group has considerable anxiety over potential personal outcomes regarding future prospects; or the community's desire for change.

There appears to be a strong personal commitment in this group towards the strategy narrative and the benefits that it may bring to the wider community. Although there appears to be a recognition that the community may have the resources to fulfil strategy outcomes, that is not shared at a community level where there appears to be considerable doubt on the communities' desire for change.

7.1.3.2.1.1 Summary – Conviction

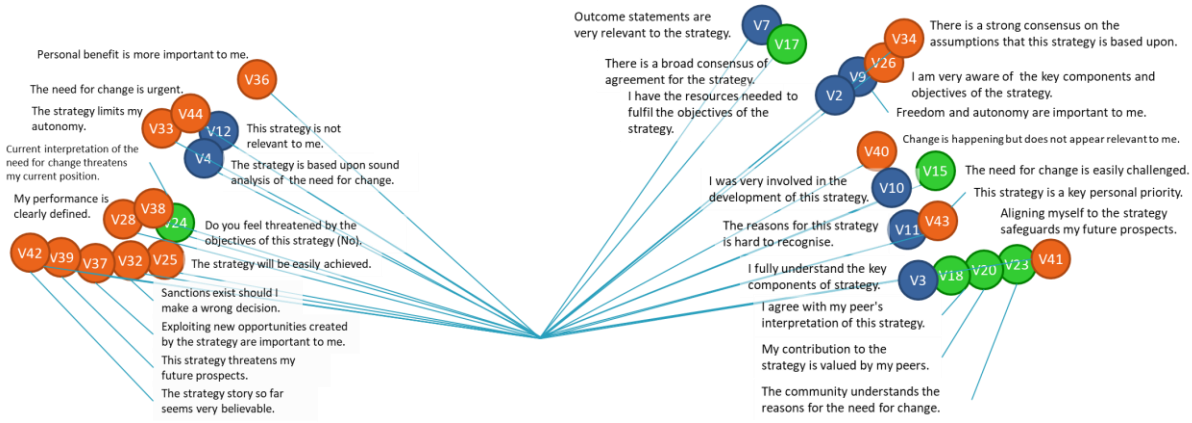


Figure 67: Cluster 2 Factor 1

There is strong involvement in strategy and therefore awareness of artefacts and assumptions being rendered by laws that make it conventional. The strong factor loadings suggest a closeness to the development of strategy and a strong belief in the interpretation of strategy artefacts that lead to a consensus. Strong rapport and perceived contribution in strategy and therefore awareness of artefacts and assumptions on an indexical level, however spatial connections seem a little compromised by perception of group participation that may question the interpretation of aims and objectives. This doubting may be due to the advent of spatial distance in time from the moment strategy was 'formed' as there is a sub-text narrative that questions the relevance of the current situation, which is strangely add odds with findings in Cluster 1.

7.1.3.2.2 Factor 2 – Scepticism

This factor accounts for 46.73% of the total percentage of variance in Cluster 2 and therefore needs to be considered as a fairly significant dynamic in the way that this Cluster is interpreting strategy narrative variables

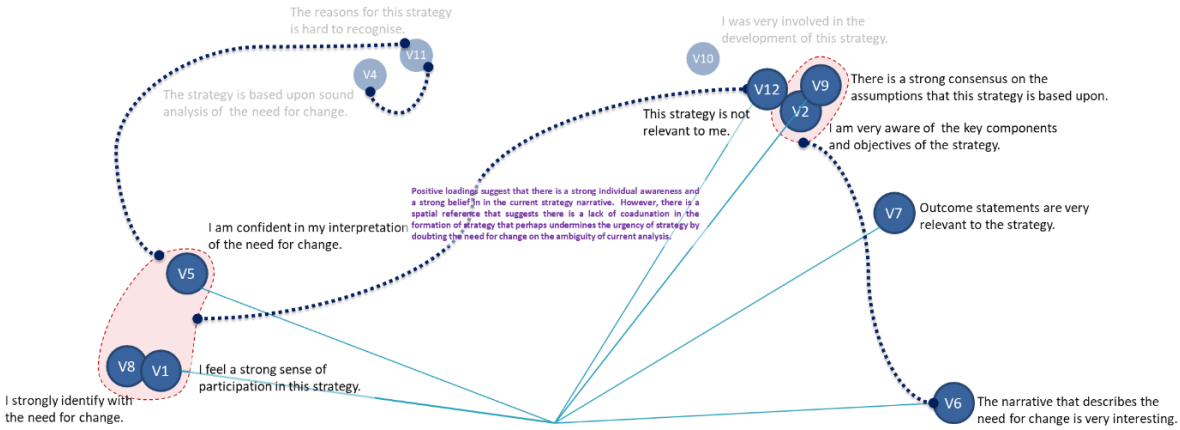


Figure 68: Cluster 2 Factor 2 - Firstness

Positive loadings suggest that there is a strong individual awareness and a strong belief in the current strategy narrative. However, there is a spatial reference that suggests there is a lack of coadunation in the formation of strategy that perhaps undermines the urgency of strategy by doubting the need for change on the ambiguity of current analysis.

There is a very strong sense of participation in the development of the strategy narrative linked to the need for change; and there is confidence in the correct interpretations of that narrative. Although there appears to be a significant lack of curiosity in the artefacts in the strategy narrative. Could that be because the architects od strategy will not be operationalising the strategy? There is some doubt regarding the existence of consensus on the assumption upon which the strategy is based, which perhaps questions the operationalising of the aims and objectives of the strategy.

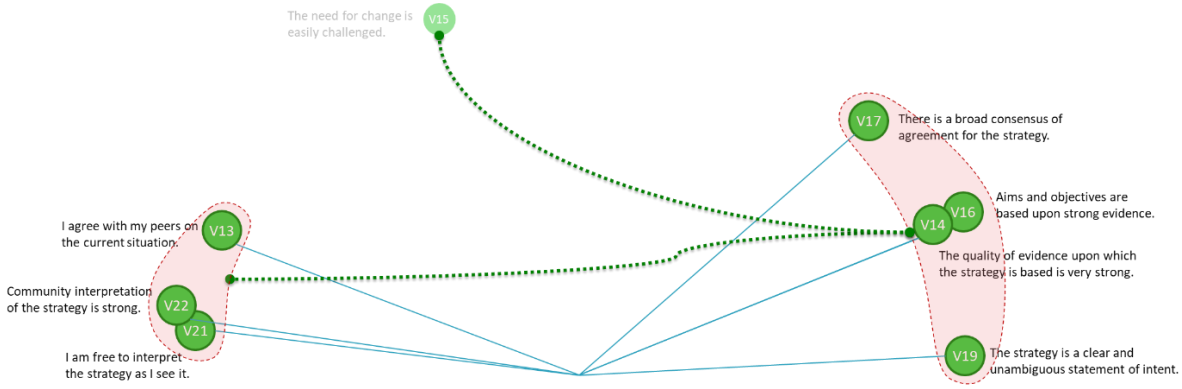


Figure 69: Cluster 2 Factor 2 - Secondness

In this cluster there is a strong interpretation of firstness that coagulates a strong belief in the aims and objectives of strategy and the evidence that they are based upon. This may lead to the cluster as promoting their own orthodoxy in their beliefs. This may mean that actors are taking a position that may not have been intended by those close to the forming of strategy. It would appear that this position is not one that they seem to share of others. Negative factor loadings give a strong impression that sectarianism does exist between clusters 2 and 1. perhaps the former lacks confidence in the latter's ability to achieve stated strategy outcomes?

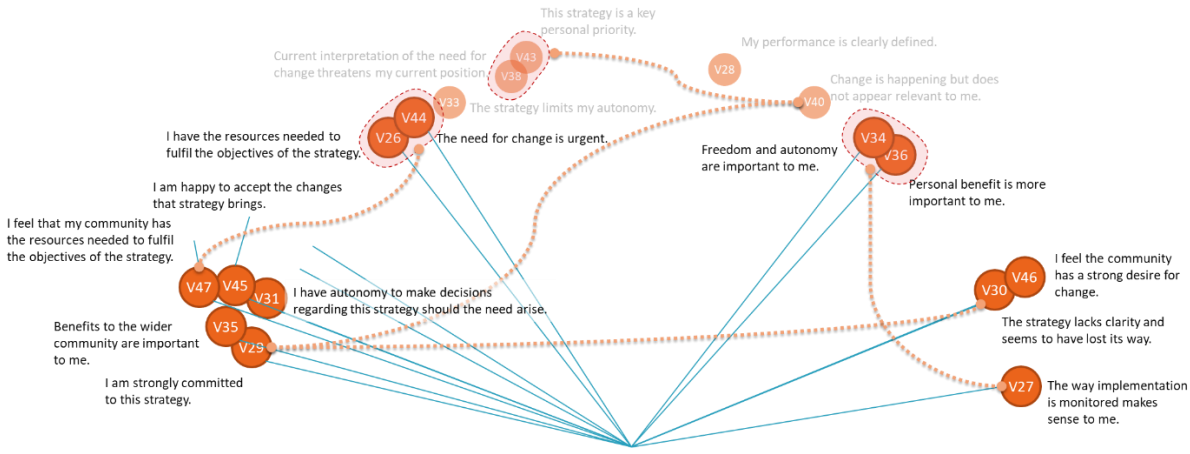


Figure 70: Cluster 2 Factor 2 - Thirdness

It appears that the architects of strategy value personal benefit and autonomy perhaps driven by the need to engineer strategy as objective orientated. There seems to be an emerging level of doubt in the clarity of strategy that is weakening their commitment to it. This form of habituation is perhaps the result of changes in the macro and microenvironment that the strategy seeks to steer a path through. Consequently, iteration of the final logical interpretant will weaken their commitment to strategy as new artefacts require interpretation.

7.1.3.2.2.1 Summary – Scepticism

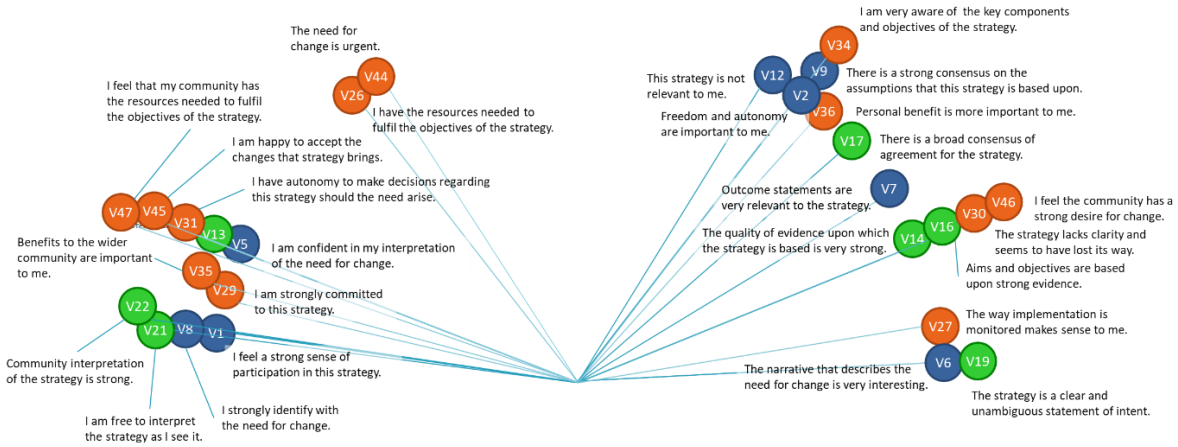


Figure 71: Cluster 2 Factor 2

However, there is a spatial reference that suggests there is a lack of coadunation in the formation of strategy that perhaps undermines the urgency of strategy by doubting the need for change on the ambiguity of current analysis. In this cluster there is a strong interpretation of firstness that coagulates a strong belief in the aims and objectives of strategy and the evidence that they are based upon. This may lead to the cluster as being doctrinal and maybe even pontifical in their beliefs. This analysis may be delineating a spatial gap between top down and bottom up strategy discourse previously discussed in 7.1.2.7 above, where managers are trying to reconcile capacity and perhaps even the viability of their own domain guided by a bottom up strategy discourse with that of a top down, command-and-control strategy discourse where the strategy narrative outlines the scope of strategy. According this (Johnson, Scholes and Whittington 2008) actors may seek to resolve this discourse from different perspectives; Implementation and Control; Sense Making; Reinterpretation and Adjustment; Relevance Bridge; Advisors also discussed in 7.1.2.7 above, as they seek to adjust to a new strategy paradigm.

It appears that the architects of strategy value personal benefit and autonomy perhaps driven by the need to engineer strategy as objective orientated. There seems to be an emerging level of doubt in the clarity of strategy that is weakening their commitment to it. This form of habituation is perhaps the result of changes in the macro and micro-environment that the strategy seeks to steer a path through. Consequently, iteration of the final logical interpretant will weaken their commitment to strategy as new artefacts require interpretation. It would appear that this

position is not one that they seem to share of others. Negative factor loadings give a strong impression that sectarianism does exist between clusters 2 and 1. perhaps the former lacks confidence in the latter's ability to achieve stated strategy outcomes?

7.1.4 Conclusion

The striking thing of note is the significant dissimilarity in the factor loadings extracted between the two Clusters. These loadings in Cluster 1 were significantly lower than those in Cluster 2. Actors who fell into Cluster 1 have been defined as 'The Choir' who may be seen as 'following' strategy. Their remoteness from the construct of artefacts in some instances makes it difficult for actors in this Cluster to associate the value of these relics to the discourse of the strategy. There is considerable emotional valence exhibited within this Cluster where for example, estrangement from the key artefacts in the strategy narrative may lead to doubting and in times of urgency may then be exacerbated by a syntactic compound in order to justify a position taken within the strategy discourse.

Being close to the construct of artefacts actors in strategy are perhaps better placed to judge and weigh their value to the strategy. This may question the validity of these artefacts and create spatial distance between some artefact and the aims and objectives of strategy. That said, the strong closeness to the development of strategy by the stakeholders in this group may be giving rise to a forced interpretation to achieve consensus, in other words group think. There is also some evidence that the orthodoxy of The Apostles, as architects of strategy, are not confident in The Choir's ability to achieve strategy goals. This lack of confidence seems to be coming from them questioning the resources available to those in Cluster 1. Being sceptical of others' ability should not be confused with cynicism. However, there is a conviction in the strategy narrative that is perhaps not matched by the quality of the artefacts that it is based upon.

Analysis consisted of correlating the individual Q Sorts to identify shared perspectives through factor analysis by respondent and by artefact. The goal of interpretation was to describe the shared viewpoint or worldview modelled by each of the factors. This involved articulating the perspectives based on the composite Q Sort for each of the factors identified yielding a set of

factors whose interpretation reveals a set of points-of-view. Having identified and interpreted a typology of statistically valid worldviews, and reviewing how behaviour or worldview has changed, it is was possible to review all the available evidence to ask what works, for whom and why.

7.2 Part Two Introduction

The purpose of this study is to provide an operational decision support framework that guides decision makers in future interventions by using a mixed method approach, this allows actors to justify with rational arguments the allocation of resources by integrating different approaches in order to better handle contingency. Mixed-method approaches allow actors to cope with group complexity in the strategy narrative using both qualitative approaches, for exploring the general problem; and quantitative approaches, for better investigating alternative options and performances. As Ferretti (2016) has observed that although there is a wide academic discourse on mixing methods, successful real examples in environmental decision and policy making are still scarce. Moreover, the assumed benefits of using mixed methods have not been systematically tested. There is an evident need to pursue and to better communicate the benefits of mixing and the research presented in this paper is an attempt to fill in this gap.

The overall goal of mixed methods research, of combining qualitative and quantitative research components, is to expand and strengthen a study's conclusions and, therefore, contribute to the published literature (Schoonenboom and Johnson 2017). In all studies, the use of mixed methods should go some way to answering research question(s) aims and objectives of the study. Ultimately, mixed methods research is about advancing knowledge and validity (Johnson and Christensen 2017). Given this goal of answering the research question(s) with increased legitimacy, this has to be regarded in the context that a researcher can nevertheless may have various reasons or purposes for wanting to strengthen the research study and its conclusions.

A popular classification of purposes of mixed methods research was first introduced by (Greene, Caracelli and Graham 1989), based on an analysis of published mixed methods studies. This

classification is still in use (Greene 2007). Greene, Caracelli and Graham (1989) distinguished the following five purposes for mixing in mixed methods research:

I. **Triangulation** seeks convergence and corroboration of results.
II. **Complementarity** seeks elaboration, illustration, clarification of the results.
III. **Development** seeks to use results from one method to help develop the other.
IV. **Initiation** seeks the discovery of contradiction and fresh perspectives leading to the recasting of questions.
V. **Expansion** seeks to extend the breadth and range of inquiry.

(Bryman 2006) formulated a list of more concrete rationales for performing mixed methods research. Bryman's classification breaks down (Greene, Caracelli and Graham 1989) categories into several aspects, and he adds a number of additional aspects, such as the following:

I. **Credibility** that employing both approaches enhances the integrity of findings.
II. **Context** refers to cases in which the combination is justified by externally valid findings.
III. **Illustration** refers to the use of qualitative data to illustrate quantitative findings.
IV. **Utility** or improving the usefulness of findings refers to a suggestion, that combining the two approaches will be more useful to practitioners and others.
V. **Confirm and discover** using qualitative data to generate hypotheses and using quantitative research to test them.
VI. **Diversity of views** two slightly different rationales, combining researchers' and participants' perspectives through quantitative and qualitative research respectively, and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research.

The purpose of Part Two survey methodology is to use quantitative data to illustrate the qualitative data analysis in Part One methodology and add utility to improve the usefulness of findings in the context of Part One Methodology.

7.2.1 Stakeholders Taking a Position

The final aim of this analysis is to develop a view of the people landscape; the relationships between the different stakeholder groups; the strategy artefacts they care about most; and the durability of the strategy narrative. To this end, various stakeholder mapping techniques exist and the most used one is the power/interest matrix proposed by Mendelow (1981). Authors such as Ferretti suggest that identifying and studying the stakeholders involved in a decision problem is of particular importance in the strategy decision making domain since key participants can then

be invited to participate in scenario planning sessions where cognitive mapping techniques can be used to identify and discuss the aims and objectives to be pursued with a more systemic and interdisciplinary approach (Ferretti 2016).

One aspect of scenario planning that has received little attention is the development of structured approaches for anticipating the interpretation of stakeholders engaged in a strategy narrative (Wright and Cairns 2011) . This aspect can be important because powerful stakeholders whose interests are threatened by changes are unlikely to remain inactive and their behaviour is likely to have a direct effect on strategy discourse and future direction (Cairns, Goodwin and Wright 2016).

The conceptualisation of stakeholder theory is credited to (Freeman and Reed 1983) who devised a stakeholder approach to strategic management. Since that time the notion of who, or what, constitutes a stakeholder has occupied much time in debate. Mitchell, Agle and Wood (1997) traced this development from as far back as 1963 through to the time of their paper. What is noticeable is that early definitions of stakeholder were very broad. For example, they quoted Freeman and Reed (1983) who described a stakeholder as someone that:

> [. . .] can affect the achievement of an organisations objectives or is affected by the achievement of an organisation's objectives (Freeman and Reed 1983) .

It could be argued that in politicised environments there are considerable limitations to the scope for agreement amongst often diametrically opposed views. This is no less the case in strategy discourse. In this respect, this study suggests a broader use of discourse analysis in political science to present the argument that most phenomena in politics are forms of text and talk may be considered obvious. Especially so, to a discourse analyst who recognise that most problems in political science can in principia be studied more completely and sometimes more adequately when it is realised that the issues have an important discursive dimension. In other words, analysis of the particular properties of political contexts, political discourse analysis in many respects will be like any other kind of discourse analysis (van Dijk 1997)

As Walley (2013) states, participants engaged in strategy discourse may never agree on a course of action, even if a compromise is offered. In some cases, there will be clear "winners" and

"losers", where the losing parties resist the change throughout the process and will not be won over at the end. If we compensate most stakeholders who lose out during a change, the risk is that compensation becomes a norm and is expected as a mode of behaviour in future projects. Complex mitigation or scope change can be equally risky strategies, threatening scope creep. This view may be supported by Newcombe (2003) who observed the conflicts in meeting stakeholder needs and questioned whether stakeholders can be repositioned (Walley 2013).

The purpose of Part Two methodology is to define the current stakeholder position. The purpose of Part One methodology is to elucidate why they have taken that position, through the novelty of examining stakeholder participations in the strategy narrative from a semiotic perspective. It is in this context that the following data analysis was conducted.

7.2.2 Data analysis and Findings

The means by which fieldwork was conducted for this methodology tool was set out in paragraph 5.4.6 above. The same respondent base was encouraged to simultaneously complete the Part Two questionnaire upon completing the Q Sort in Part One using the same set of variables set out in Tables 35 – 37 above. While the rationale for each variable remained the same, the wording was altered to place the question in a rating context to facilitate completion by respondents.

Gaining access to participants to complete Part Two was even more difficult than that for Part One. One can only speculate as to the reasons why, but the results that came through were consistent both with each other and the findings extant from Part One. This consistency suggests that there may be some utility in this approach.

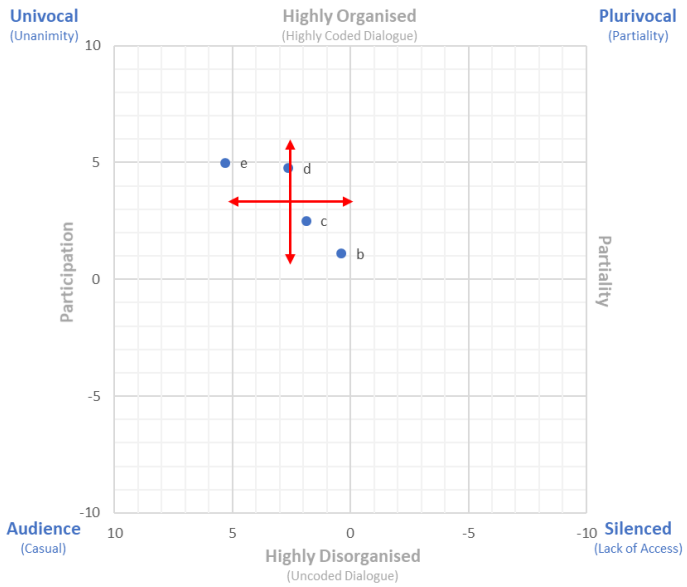


Figure 72: Mapping Respondents Positions onto the Semiotic Square

The respondents at Figure 72 above generally plot toward the univocal concept of strategy narrative (Robichaud, Giroux and Taylor 2004), however the positions taken are not convincing in this regard and may further suggest a certain ambiguity that correlates with the findings in the analysis of factors in Cluster 1. The mapped positions of respondents may suggest a fairly organised orientation compared to the 0, 0 axis at the centre, plotting the average score from respondents suggests a different dynamic represented by the red cross on the map. If the average score were taken as a definition of the group centroid, then this may be considered as some respondents who lack access to the strategy discussion who exhibit some level of partiality relative to the group as a whole. This stakeholder map exhibits utility in defining where actors are in relation to each other regarding their different interpretation of the strategy narrative.

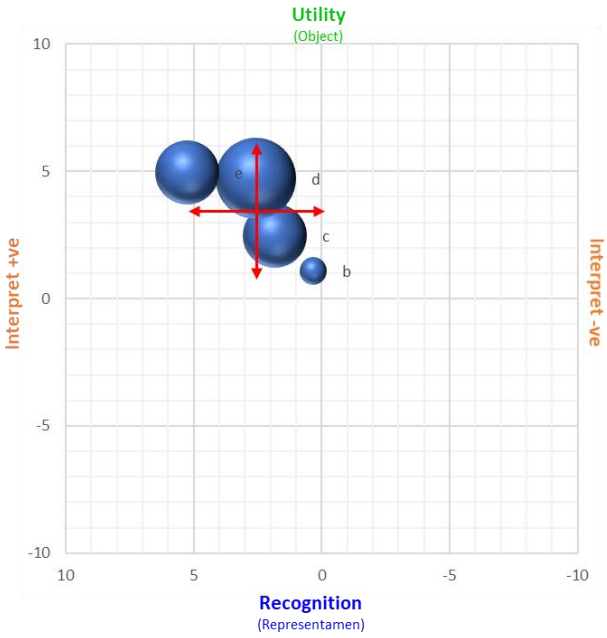


Figure 73: Mapping Respondents Positions onto the Semiotic Square and Perceived Influence

The stakeholders at Figure 73 above shows the same dynamic that is mapped in Figure 72 above, with the addition of the respondents' perceived level of influence on the strategy narrative. The size of the bubbles helps to define weighting of respondents' perceived influence on the strategy narrative.

In particular, this mixed-method approach combines stakeholders' analysis (Dente 2014) with cognitive mapping (Eden 1988). Together they are a powerful method of analysis and evaluation that can inform decision makers who need to justify interventions in the strategy narrative. Among the different possibilities for designing mixed methods research it seems particularly appropriate in the context of strategy interventions. Mixing in this study means that methods have progressively been linked to complement each other or to cover a larger proportion of the different tasks in the planning process (Ferretti 2016).

7.3 Chapter Summary

Identifying and studying the stakeholders involved in strategy is particularly important since stakeholders can then be invited to participate in sessions where cognitive mapping techniques can be used to identify and justify the means of intervention with as systematic and interdisciplinary approach. A collaborative approach can effectively engage the stakeholder

group in a more meaningful discourse to tackle the challenge. The existence of a plurality of points of view will allow those concerned with strategy discourse to examine possible approaches to the problem, different intervention methods, and decision-making protocols. That is, complexity increases the number of possible alternatives and is often an important asset (Dente 2014). This is why the methodological process combines stakeholder's analysis with cognitive mapping (Eden 1988) for purposes of knowledge acquisition and problem structuring.

Cognitive mapping is a casual-based mapping technique where concepts representing elements of a complex problem are organised and structured using the semiotic square. Hence, elements or concepts are represented as nodes, while bubbles represent the level of perceived influence in the strategy narrative. In particular, cognitive mapping is well suited for complex problems where many aspects and dimensions of the problem are difficult to comprehend adequately, or in some cases may even be totally indeterminate (Ferretti 2016).

Chapter Seven defined the scope of data extraction, using factor analysis techniques, and analysed the factor components in statistical terms and proffered interpretations on the bases of the factor loadings by triangulation of the data set from three perspectives. The basis of this analysis was used to interpret the data and justify findings from the source data. The relationship of underlying factors to each of variables was determined by the weighting in the eigenvalues and factor loadings. These loadings were indicative of perceptions held as a result of interpretation of strategy artefacts (variables). Chapter Eight will to review the output from Chapter Seven by way of a conclusion to this research study. The final chapter will discuss the research project in terms of the fulfilment of the research aims, objectives and answers to the research questions. A critical review of this whole endeavour discusses the limitations of this exercise; and will go on to highlight the key findings; the contribution to knowledge; and reflects on research journey and illustrates possible future research agenda by way of recommendation.

8 CHAPTER EIGHT – Conclusions

8.1 Introduction

Chapter Eight reviews the output from Chapter Seven by way of a conclusion to this research study. The final chapter reviews the research project, discussing the fulfilment of the research aims, objectives and answers to the research questions. A critical evaluation of the research project discusses the limitations of this exercise; and highlights the key findings; the contribution to knowledge; and reflects on research journey and illustrates possible future research agenda by way of recommendation.

This research project underpins the value of a semiotic view as a diagnostic tool to determine the position that actors take in the context of existing strategy narrative. It seeks to provide a typology based upon a semiotic framework that helps to diagnose the position that actors may take on their interpretation of key strategy artefacts; and their interpretation of them through the existing strategy narrative. The context of this narrative was to develop a discussion on the knowledge management process, as a means of developing a strategy narrative, as seen from various existing source material perspectives. In order to help synthesis, the nature of storytelling and narrative in strategy, in the context of a knowledge management and knowledge transfer framework defined, taking a semiotic view of strategy discourse, to understand the nature of interpretation of the strategy and seek to identify the means of intervention by which the strategy narrative may be shaped.

The foundation of the discussion in this chapter draws upon the findings in Chapter Six in synthesis with proceeding Chapters Three and Four as the basis of taking a semiotic view and employing semiotics as a method for diagnosing the durability of strategy. This chapter will go onto discuss limitations on semiotic theory and research methodology. The chapter concludes by discussion on key contributions to research from this study and reflect upon future research agenda that may be adopted to further define the nature of storytelling and narrative in strategy through the lens of semiotics of strategy. The purpose of this chapter is to conclude this research by restating key contributions from each of the chapters throughout and their efficacy in

addressing the research question, aims and objectives. (Whetten 1989) provides a useful construct that will aid the transitive nature of the discussion in this chapter as a means of interrogation of the output of this enquiry.

8.1.1 General Overview…

Whetten (1989) suggests a process criterion by which theoretical contributions may be judged and in the main the criteria consist of three key concepts. The first stage of the process considers the constituent elements and foundation of the theory put forward. Chapter Two forms a discussion around the nature of social architecture and how knowledge is transferred through storytelling and narrative and uses case studies to illuminate conventions. Chapter Three builds on this notion by introducing semiotic theory as a means of diagnosing the interpretation of storytelling and narrative in what is essentially knowledge management set in a behavioural game strategy context (Gächter 2005). While Chapter Four develops the argument of semiotics as a method diagnosing the interpretation of strategy.

The second stage of Whetten's criteria tests the usefulness of established argument as a means of theory development. Chapter Five defines the standards adopted to test existing theory in a new context. The aim of this was to draw upon existing semiotic theory to explicate the durability of strategy as a story of intent. In so doing the following research stance was adopted: a focus on the semiotic components; the artefacts of strategy and the vocabulary of strategy discourse; to determine how actors in strategy take positions as a result of their interpretation of these artefacts.

The final stage brings together as a summary the expectations of this study and its contribution to existing theory. The foundation of this discussion can be found in Chapter Six and Seven that shows the validity of the methodology and the research stance adopted. These chapters brought forward a reasonable diagnosis of the current strategy discourse in the senior management team under research. It further explicated the nature of that discourse; the identification of discourse clusters within this group; pointing to the possible nature and extent of intervention that may be required to manage strategy contingency; and goes some way to confirming the validity of taking

a semiotic view of storytelling and narrative in strategy discourse as a means of defining the durability of the extant strategy.

8.1.2 Meeting the Aims, Objectives and Research Questions of the Thesis

According to Whetten (1989) there are four building blocks that may be considered as a framework for theory development. Firstly, **What**: Answers to the concepts and theories elucidated to justify the meaning of the research. In the case of this study, which factors (variables, constructs, concepts) should be considered as part of the explanation of the social or individual phenomena of Interest; concepts include Whittington's cultural web; Peirce's triadic approach to semiotic interpretation; and Greimas's semiotic square. Secondly, **How**: Identifies the relationships between the theories that are extant in this study. The novelty of this study lies within the combination of semiotic theory; a contemporary diagnosis of semiotic artefacts; and the use of Q-Sort factor analysis to extract meaning from the interpretation of those artefacts by respondents in the study group. Thirdly, **Why**: What are the underlying psychological, economical, or social dynamics that justify the selection of factors and the proposed causal relationships. Peirce's triadic approach to semiotic theory forms the basis of interpretation that helps to identify the key dynamics extant in a strategy discourse at a particular point in the strategy lifecycle. Fourthly, Who, Where, **When**: Helps to define how this theory may be tested in different context, after all, what is storytelling and narrative but a strategy discourse as a purpose to achieve a particular end. This discourse uses a combination of existing theory set in a novel and new context (Whetten 1989).

8.1.2.1 Aims and Objectives

The first research aim set out to understand the nature of storytelling and narrative in strategy discourse, with the objective of locating stages in the knowledge continuum; and the process that transforms artefacts in strategy from symbols; to data; and into information that may facilitate the transfer of knowledge. There then followed a review of the knowledge continuum and the interlocutors that facilitate the transfer of knowledge through a resource-based view; a discussion on strategy discourse as a recognised field of study; and a discussion on a more general theory of

social constructivism regarding the social world, social action; and the relationship between artefacts and actors in a social construct of human relationships that consist of thought and ideas.

The second research aim was determined to establish the link between knowledge transfer and storytelling and narrative in strategy discourse and developed this philosophical position in the first aim through the lens of semiotic theory; in the context of social norms that regulate people's behaviour toward establishing a position in strategy. The objective was to locate and define, through original fieldwork research, the essential idiosyncrasies of stories, through a semiotic approach. To understand how storytelling through actors and narrative as artefacts contributes to the transfer of knowledge in strategy projects that rely on knowledge transfer. The discussion followed the social norm concept that helped to better understand the nature of discourse in organisations. This argument developed the notion that the concept of social norms is socially rooted in a shared knowledge about behaviour in communities of shared knowledge about desirable, acceptable and exemplary behaviour. Therefore, social norms may be seen as forces that make the members of a community behave or think in a certain way as all knowledge can be seen as consisting of norms and attitudes where attitudes are norms without conditions.

The third research aim sought to define the extent to which actors in strategy take a position as a result of their engagement with the strategy story and narrative via a semiotic approach. This compelled the enquirer to define a semiotic canvas to contextualise the use of a semiotic approach to diagnosing existing strategy discourse as a means of knowledge transfer through the use of strategy discourse norms as semiotic artefacts and socio-semiotic processes of speech commodification, storytelling, narrative, communities of practice in the discourse community. The ambition of this aim was answered in three stages: firstly, the definition of the semiotic landscape through the lens of Saussurean and Peircean semiotics; secondly the basis of a semiotic approach to define strategy artefacts through current discourse in the field of strategy-as-practice; and thirdly a discussion on what is strategy and how strategy privileges the signified in a semiotic sense. This objective helped to establish a typology, through a semiotic approach, that facilitated the mapping of actors taking a position in a strategy narrative.

8.1.2.2 Research Questions

The pursuit of achieving the research aims and objectives was guided by a set of research questions that helped to set the parameters of this research. In turn, research Question One asked: Is a knowledge management perspective enough to diagnose the true nature of knowledge transfer through strategy discourse? In as much that a great deal of academic research has been done to suggest a definition of the knowledge management continuum, there is broad consensus that the gestation of knowledge in that body of work lies in the construct of symbols. However, there was very little in this field to suggest how these symbols are interpreted, or indeed how the interpreter establishes a position about the mien of these symbols. This research shows that a semiotic application of how strategy symbols and artefacts may be interpreted is instructive in going some way to establishing the position that actors may be taking in strategy.

For the purpose of this research project, Research Question Two asked: What are the strategy artefacts that may so define strategy discourse? The nature of this enquiry forced the development of a defined set of strategy artefacts based upon existing theory as a basis for primary research, and in this regard an exploration of the strategy discourse landscape helped to elucidate possible key symbols and artefacts that may have a mediating effect on knowledge transfer through strategy discourse.

Building on Research Question Two: RQ 3: To what extent does strategy conversation, narrative, and discourse contribute to the position that participants in strategy may take? Strategy conversation can be seen as a form of meaning making assimilated via the interpretation of discourse artefacts that represent value at any particular moment. To help track such developments, it was necessary to classify the symbols and artefacts of discourse in some way to establish the nature of the discourse as actors seek to take a position. These symbols show the way artefacts are simplified and assume more of a 'shape' clustered around what actors were seeing as the dominant conversation at the time. In answer to Research Question Three, the results from Research Question Two helped to define the extent to which current strategy discourse in the study group is likely to contribute to strategy outcomes.

Studying the result of Research Question Three facilitated the answering of Research Question Four: Can a semiotic perspective help to diagnose the position that actors, as key stakeholders in strategy, take on existing strategy? This study shows strategy to be a socially situated construct that shows interpretation, written or unwritten, are made by actors in strategy discourse. This study shows that even without power actors in strategy are neither impotent nor without influence, they make choices reflected in the positions that they take in the strategy discourse. This was achieved through the lens of social semiotics and the application of Peirce's triadic semiotic theory, which added a degree of richness to the diagnosis that might otherwise have remained hidden in any other type of enquiry. Studying the social semiotic dynamic of a given discourse is to observe how narrative was used for the purpose of strategy outcomes by drawing up an inventory of artefacts and their uses. The analysis and findings in Chapters Six and Seven go some way to answering Research Question Four and leaves the observer with a view of the disposition of strategy discourse within the study group at the time.

And finally, Research Question Five relates: Can the semiotic diagnosis of strategy discourse be a useful means of intervention in the nature and direction of the strategy narrative? Casual observation of this view should facilitate strategy architects towards a contingency for strategy intervention according to the nature and the extent of conditions that may be prejudicial to the prosecution of the ambitions of the strategy. From an etymological perspective the use a semiotic framework helps diagnose how actors take a position and illuminates a new understanding of the nature of interpretation; as a means of intervention by which the strategy narrative may be reshaped. It further explicates the nature of discourse pointing to the nature and extent of intervention that may be required to manage strategy contingency; confirming the validity of taking a semiotic view of storytelling and narrative in strategy discourse. The relative ease of the techniques in this study suggest that it is a useful way to evaluate intervention and provide a method for identifying distinct, yet holistic viewpoints. This also shows how this can be applied in practice making this research more tangible, substantive and compelling.

The residual significance of this thesis is that it goes some way to answering the plea from authors across the academic fields of knowledge management; critical discourse analysis; and strategy as practice of the need for a more complete diagnosis of strategy narrative intervention, underscored by an observation relating to the influence of self-interest of stakeholders.

8.1.3 Limitations of Research

This section will review the limitations under which this study was carried out. The limitations identified were in the context of semiotic theory and its application to discourse, these are discussed in the form of criticisms and strengths of semiotics and the validity of its contribution to the field of discourse analysis. This section then discusses the limitations of research and the search for an adequate sample frame that was fit for purpose in the context of this study.

8.1.3.1 Criticisms of Semiotic Analysis

Although a great deal has been theorised and written about the field of semiotics, many including semioticians themselves see this area of study as loosely defined and lacking the analytical integrity of other fields of enquiry. In particular, social semiotics is still seen by many as an imperialistic practice with a pretentious form of literary criticism rooted in subjectivity and conjecture (Chandler 1998). indeed, Chandler states that some claim that semiotics does not lend itself to quantification and that the semiotic claims require other methods.

While semioticians sometimes present their analysis as objective they are in the main subjective interpretations, however this is changing under the imperative that semioticians are under increasing client scrutiny to justify their interpretations from an empirical perspective that has a quantitative locus. Much of what is observed through a semiotic approach has a focus on langue rather than parol and rather ignores the process of production. Sociologists argue that semiotic analysis must be related to social relations that may give rise to the form of practice. It is difficult to resist Buxton's assertion that you cannot deny the social determination that exists in the interpretation of signs, researchers must consider not only how signs signify (structurally) but also why (socially. The relationships between signifiers and their signifieds may be ontologically arbitrary but they are not socially arbitrary (Buxton 1990). Additionally, theorists have suggested

that structuralist semiotics has often obscured the significance of power relations in the constitution of difference, such as patriarchal forms of domination and subordination or in agency (Franklin, Lury and Stacey 1991).

Many observers have used semiotics to reveal political purpose to illuminate the social context of communities and tend to assume that semiotic analysis can look beyond signs to an underlying reality, but post-structuralist theorists argue that researchers cannot stand outside our sign systems. Therefore, some contemporary theorists have rejected a purely structuralist semiotics. But such a rejection need not involve a wholesale rejection of semiotics. Influential as it has been, structuralist analysis is but one approach to semiotics (Sturrock 2003). Those that 'practice' post-structuralist semiotics, focus on what one what Jensen describes as situated social semiosis (Jensen 1995). This at least is the rhetoric of social semioticians, but the extent to which social semiotics has so far met the concerns of sociologists is debatable. Chandler (1998) believes that social semiotics is still under construction. That said, many contemporary theorists have associated themselves with this development include Gunther Kress, Robert Hodge, Theo van Leeuwen, and Klaus Bruhn Jensen.

Most literature on semiotics continually pursues the implication of new theories for framing semiotic theory. Initially the study of semiotics by early theorist like Saussure and Peirce never studied the social use of signs, however Saussure did see semiotics as the study of signs situated in a social context. As for Peirce, the notion of semiosis as a dialogic process is central to his thinking. Signs do not exist without interpreters, and semiotic codes are of course social conventions. However, it has to be acknowledged that an emphasis on the social dimension of semiotics in the form of the study of specific meaning-making practices is relatively recent outside of specialised academic journals and it is not yet much in evidence at the heart of the activities of many semiotic researchers (Chandler 1998).

8.1.3.2 Strengths of Semiotic Analysis

The study of discourse in a strategy context is fraught with theoretical assumptions that can lead to inertia in the diagnosis of the difficulties that those engaged in discourse may find themselves

in (Culler 1986). This study asserts that semiotics provides a novel diagnosis of the vicissitudes of strategy discourse by helping to segment the nature and the direction of the narrative (Poythress 1982). To justify this assertion, semiotic enquiry has to be seen as analogous to language as a system extended to community behaviour and alter the nature of enquiry by moving away from a purely positivist and empirical tradition which has mediated limited previous cultural theory (Franklin, Lury and Stacey 1991). Semiotics provides researchers with a potentially unifying conceptual framework and a set of methods and terms for use across the full range of signifying practices (Chandler 1998), although this practice may not be seen as a discipline it is at least a focus of enquiry, with a central concern for meaning-making practices which conventional academic disciplines tend to treat as peripheral.

Traditional structural semiotics has in the past primarily applied to sign analysis, but it is misleading to identify contemporary semiotics with structuralism. The advent of social semiotics speaks to the observer's increasing concern with the social interaction of the observed (Chandler 2007). In either form, semiotics is an invaluable manifest that seeks to look beyond the simple interpretation of mere texts; to look behind or beneath the surface of the observed; and to discover the underlying socialisation phenomena. Semiotics has become increasingly adept at connotating meaning by going beyond the obvious on the surface and enquiring depth beneath the obvious to provide new insight into sense making. Social semiotics alerts researchers to how the same text may generate different meanings for different readers.

Whilst Saussurean semioticians have sometimes been criticised for seeking to impose verbal language as a model on media which are non-verbal or not solely or primarily verbal (Chandler 2007), the virtue of adopting a linguistic model lies in treating all signs as being to some extent arbitrary and conventional, thus fostering an awareness of the ideological forces that seek to naturalise signs. Although things may exist independently of signs, researchers know them only through the mediation of signs. Actors see only what our sign systems allow us to see. Semiotics helps to realise that whatever assertions seem 'obvious', 'natural', universal, given, permanent

and incontrovertible are generated by the ways in which sign systems operate in our discourse communities (Culler 1986).

The most revealing aspect of semiotics is the ideological nature in the way that meaning is invested in the signs that are extant and how that may condition or own reality of what we observe. Volosinov (1973) believes that ideological creativity refracts reality through our interpretation of signs set in different social contexts. There is no ideological neutrality in sign systems: signs function to persuade as well as to refer. Sign systems help to naturalise and reinforce particular framings of the reality extant at that moment in time, although the operation of ideology in signifying practices is typically masked. Consequently, semiotic analysis always involves ideological analysis. Many semioticians see their primary task as being to denaturalise signs, texts and codes, therefore the practice of semiotics can show ideology at work and demonstrate that realities may be challenged. If signs do not merely reflect reality but are involved in its construction, then those who control the sign systems control the construction of reality.

As an approach to communication which focuses on meaning and interpretation, semiotics challenges the reductive transmission model which equates meaning with the message in this case in storytelling and narrative (Chandler 1998). Signs, such as those previously enumerated in Table 14; Table 15; and Table 16; do not convey meanings but constitute a medium in which sense making is constructed. Semiotics helps researchers to realise that meaning is not passively absorbed but arises only in the active process of interpretation during the discourse of strategy. Semiotics now seeks to study social artefacts and practices on the basis of unified principles, attempting to bring some coherence to cultural studies in this field. Whilst semiotic analysis has been widely applied to the literary, artistic and musical canon, it has also seen some application to the decoding of a wider popular cultural phenomena (Chandler 1998).

In the practical application of semiotics, an understanding of its key concepts may be seen as essential in diagnosing the complexities and the dynamics in communications that actors may engage in. A lack of scrutiny through the lens of semiotics may frame the discourse to the

advantage of those who do; and to the disadvantage of those who don't. For Peirce, 'the universe... is perfused with signs, if it is not composed exclusively of signs'; there is no escape from signs (Peirce 1931). As long as signs are produced, actors will be obliged to understand them. This is a matter of nothing less than survival (Volosinov 1973).

Semiotics can be applied to anything which can be seen as signifying something - in other words, to everything which has meaning. Within the Saussurean tradition, the task of the semiotician is to look beyond the specific texts or practices to the systems of functional distinctions operating within them. The primary goal is to establish the underlying conventions, identifying significant differences and oppositions in an attempt to model the system of categories, relations, connotations, distinctions and rules of combination employed (Chandler 1998).

8.1.3.3 Research Critique

This research applied a mixed methodology and, in this sense, therefore adopts a research overlap between exploratory and confirmatory research protocol (Saunders, Lewis and Thornhill 2015; Collis and Hussey 2014). Confirmatory in the sense that this research focussed on the interpretation of artefacts in strategy using existing semiotic theory: and exploratory in the sense to elucidate why actors in strategy may take such a position and uncover the abductive reasoning (Peirce 1931; Atkin, Albert 2008) of logical inference from an observational set of variables that found the likely explanation for taking a position.

Substantial research and existing literature resources seem to have a preoccupation and focus on the outcomes of strategy in terms of failure or success. The difficulty faced by the researcher lay in lack of valid referenced theory that brought together a means of diagnosing the nature of interpretation of the strategy narrative as inputs to strategy development. It is the novelty of this research that moves research forward by applying Q Methodology and interpreting the results through a semiotic lens; and how this typology may fashion the intervention of existing strategy narrative to achieve a more desirable outcome for strategy.

The fieldwork of this research was faced with adopting a methodology that could satisfactorily measure complexity in social discourse in a small respondent base; and Q Sort was adopted as a

means of useful enquiry. That said, one should not underestimate the care that has to be taken to make sure that the respondent base does understand the Q Sort process when faced with a large number of variables. The variables themselves need to be crafted as clear and precise and concise statements, whilst brevity may always be in the mind of the examiner crafting the statements there is a danger that meaning may be lost. In this regard some statements did test this rule and intervention was required by the researcher in this regard to overcome some ambiguity. The sorting process required respondents to use the Q Sort convention of sorting the statements into a pseudo normal distribution, requiring participants to place fewer statements at the extremes and more statements towards the centre of a pyramid boxed grid.

Using SPSS software, the data was analysed using factor analysis techniques that revealed statistically significant share perspectives that allowed subjectivity to be captured reliably, scientifically and experimentally. The Q-sort technique worked effectively despite the relatively small number of respondents (however there were sufficient to enable the technique to be statistically significant). Where available, interview data, corroborated and enriched the Q Sort results. The relative ease of the technique suggests that it is a useful way to evaluate expensive interventions and provides a method for identifying statistically distinct, yet holistic viewpoints. This research applies a positive demonstration of the effectiveness of Q Sort as a realist evaluation. The practical implication of this research is the creation of a typology that would otherwise have remained hidden and illuminates possible interventions to control the strategy narrative strengthened by the veracity of research findings.

A realist evaluation seeks to answer what works, for whom and why. This theory consists in the main of three elements, the context, mechanism and outcome (CMO) (Pawson and Tilley 1997). Contexts, in this instance, are the senior management team responsible for strategy at a major city-based institution. Mechanisms are most easily considered as the responses elicited by the research tools in context, and in this project chiefly consist of changes to reasoning and emotions of the participants in the prosecution of the existing strategy. The mechanism is the interaction between the strategy players in the study group and the reasoning of its intended outcomes

through storytelling and narrative within the study group. Outcomes are the focus of behaviour changes that may be necessary to intervene as a result of the findings of this enquiry.

These limitations have implications for further research work. A methodological tool exists to define the position that strategy actors in the form of that explicated in this study. A more rigorous alignment of strategy artefacts to semiotic study will resolve the limitation of this research and create certainty in the interpretation of the positions taken and therefore resolve issues of certitude in contingency for dealing with strategic drift (Handy 1989).

8.2 Key Findings

8.2.1 Initial Analysis

This research observed a strong level of support for strategy within the study group and in general artefacts were relatively easy to recognise and the image presented by the group in the initial analysis was one of consensus in interpretation. Analysis of the contextual discourse included in the initial analysis would appear to reflect broader cultural and social influences which in turn gives urgency to their interpretation in relation to Chouliaraki and Fairclough (2010).

Wittgenstein (1983) and Waismann (1965) assert that any discourse analysis reveals inexhaustible descriptive possibilities, in particular, where empirical research focusses on the interrelationships between discourse and wider social structures. The spatial distance to artefacts is palpable, consequently to an extent that for some actors the level of curiosity in them would appear to be very low. The negative factor loadings seem to point towards fog and spatial distance from artefacts, perhaps entropy; while the positive factor loadings seem to pull towards an interpretation that may suggest some form of amelioration through difficulty in defining context and interpretation.

A contribution of poststructuralism to semiotics is its focus on the importance of agency in the process of interpretation, thus validating empirical work in semiotic studies on the ability of audiences to select from discourse what they expect to get from it. This supports Peirce's notion of the interpretant, which is essentially a process of potentially infinite semiosis (pursuit of the

final logical interpretant) that is, the process of deciphering what something 'stands for'. The Peircean approach to semiosis has become a dominant one in semiotics, defining its current zeitgeist. It has been particularly useful in explaining the ways in which certain discourse is designed to produce semiosis. A common technique in Peircean-based semiotics is to identify how iconicity shapes the form and content of texts, iconicity being the primary force in semiosis (Atkin 2008). Because of the existence of Agency, actors may feel intimidated and this exacerbates a feeling of top-down management regime.

This agency creates a hierarchy of narrative that gives rise to some spatial distance between discourse groups and the imbibing impression on some that some respondents may feel better informed than others, therefore some may be easily persuaded while others may exercise an agency disparity; leading to a lack of authority by those who are doubting. Peirce recognised the dyadic nature of semiotic interpretation where uncertain habituation does exist (Cobley 2010). Maybe some spatial distance between strategic intent and the way strategy as practised is extant across this community. Strategy is not easily challenged. Lack of orthodoxy is evident due to the existence of agency and leads to the desire to 'distance' some strategy actors from strategy artefacts because these artefacts are perceived as threatening. Participants appear to be feeling considerably threatened by the current strategy narrative and seem particularly disinclined to associate themselves with strategy outcomes as strategy, to some actors, is seen as threatening their individual prospects. The pursuit of final logical interpretants, in isolation of each other, only serves to create a widening spatial distance and agency between participants and will ultimately lead to coalitions.

8.2.2 Cluster Analysis

The agency of social construction is very prevalent in the data collected by this study. The initial detection connectedness between communities solicited an enquiry in the shape of this connectedness that identified two distinct clusters extant in the strategy community. The initial detection of potential group thinking became apparent as repeating patterns were evident in the data. This is a widely accepted phenomenon by those who study social construction. The

discursive coordination in the pursuit of social ends is a natural tendency as actors become socially aware of others' interpretation of strategy artefacts and through that their agency on individuals and coalitions within the strategy group (Gergen 1999). initially the data suggests a fair degree of consensus and engagement in the strategy narrative, there is some low-level background 'noise' perhaps coming from dissimilar interpretation of artefacts in the narrative. Further triangulation of the data illuminates the existence of clusters and served as a reference to further investigate this meaning as a strategy discourse (Asnawi, Gravell and Wills 2012). Technically this study identifies the novelty of applying semiotic theory as a means of establishing how stakeholders are taking a position in regard to strategy. To this end, various stakeholder mapping techniques exist and the most used one is the power/interest matrix proposed by (Mendelow 1981). However, diagnosing strategy requires a much wider prospectus other than a fixation on mere power and interest, which are after all only part of the discursive landscape. Ferretti's pursuit of a spatial multicriteria evaluation underpins the justification for this mixed method approach to diagnosing the positions that stakeholders take in strategy (Ferretti 2016). What was clearly identifiable was the definition of two clusters that could clearly be defined as strategy planning as the domain of what the researcher may define as Clerics and Apostles; and the Proletarians whose behaviours the strategy was set to try and change.

8.2.2.1 The Architects of Strategy

Communities, organisations or management hierarchies do not have minds, bodies and souls beyond those who are stakeholders within them (Henderson 2017). Just as they have no sense of past, present or future that is independent of those involved in the interpretation of strategy artefacts based on past and present experience, and future expectations. Henderson (2017) recognises that within strategy there are two key stakeholders groupings; the strategist who anticipates the future on the basis of the past and present and are therefore the Clerics who design and frame; and the universally accepted truth that in order to implement strategy there is a need for workers who operationalise the strategy, the Proletarians.

As Clerics to strategy design and communication, one may assume a strong involvement in strategy and therefore awareness of artefacts and assumptions being rendered by laws that make them conventional. Analysis of the data suggests that this was not working as there is recurring evidence that the reasons for strategy were hard to recognise as a qualsign; therefore, functioning like a sinsign the clerical discourse became disembodied by the passage of time in a spacio-temporal sense that loses shape as a sign. So, the iconic nature of the semaphore was either seen as irrelevant or simply ignored through the lack of interpretation.

As Clerics one would hope that strategic conversation would go some way to mediate the relationship between strategic planning and strategic behaviours in the wider strategy discourse (Johnson 2006). The fact that it didn't does not stop the Clerics from adopting the position of Apostle, but the evidence suggest that this only partially mediated the strategic conversation between the Clerics and the Proletarians. The evidence suggests that two things happened; as the strategy planners sought to persuade the behaviours of stakeholders at a more operational level, they became sceptical of the Proletarians' ability to achieve strategy objectives; at the same time the Proletarians became more sceptical of the relevance to strategy and were possibly sub-consciously undermining strategy as a consequence. This form of habituation (Bergman 2009) is set against changes in the operating environment and in the wider market dynamics of the business. Continued iteration of the final logical interpretant (Bergman 2009) weakens their commitment to strategy as new artefacts require interpretation. Peirce in (Bergman 2009) describes the search for a final logical interpretant as both a progressive and regressive process as the observer strives for a final logical conclusion that allows them to establish a position on the object observed.

8.2.2.2 The Proletarians

Perceptions of management performance emphasise the end view related to performance management driven by a resource-based view of the business (Prahalad and Hamel 2009), whereas Fraser and Zarkada-Fraser (2003) that perceptions of stakeholders in strategy present a more meaningful measure because they indicate the effect of management behaviour on the

course of strategy development. The need for participation in strategy exists, but only at a personal level. The lack of consensus in what the strategy artefacts represent will lead to a wide interpretation across the community and leads actors to question the veracity of those artefacts and therefore they become sceptical and even fearful of likely outcomes. These stakeholders either do not or are unwilling to interpret the iconic nature of the artefact. The data suggests that this is due to doubting in terms of firstness. The group have some spatial distance between artefacts and their interpretation, some may well understand the relevance of strategy but may be undermined by the lack of participation in the forming of strategy. Questioning the relevance of strategy in the first trichotomy may suggest a lack of involvement in the development of strategy. If Clerics want to gain participant buy-in to strategy they need to involved Proletarians more closely with the building of strategy and the means by which progress will be monitored and evaluated. The process of Clerical negotiation can be defined by Peirce as habituation, Bergman's interpretation of Peircean logic Bergman (2009) argues that the first logical interpretant is defined as conjecture; which establishes a habit that enables imaginary experimentation; driven by various motives such as prejudice, bias, chauvinism and discrimination; as the logical final interpretant is derived. The final interpretant is an ideal and ideals can lose dominion if challenged by enquiry and/or new stimuli. This form of semiotic idealism may be referred to as habituation. Strategy discourse in the community provides a way to seek out a resolution to the actor's dissonance through experimentation of different perspectives. When actors are close to exhausting the experiential process through interpretation and rationalisation, they then move closer to taking a position. The final logical interpretant of those who lead on strategy is adrift from consensus. Followers of strategy feel that either some key strategy artefacts lack transparency; or there is a genuine inability to interpret those artefacts. Either way, actors may not actually trust strategy and are therefore unwilling to align themselves to it. There is a strong perception that the strategy narrative is limiting individual sovereignty, given that there is a recognition that autonomy is important to some in the respondent base this suggest that there may be a lack of recognition of this in the langue of the strategy narrative.

This spatial distance may have led to a sense of isolation and therefore difficulty in forming consensus around the artefacts. The mediators through which the representamen and the object are rendered in relation to the interpretant suggest there is a strong application of knowledge, corresponding to intellectual experience and the application of rules, laws, and grammar of strategy artefacts; however, the interpretation of this factor may be defined as a form of fluid habituation in that actors are trying to achieve consensus in interpretation but perhaps the lack of community contradicts this effort (Bergman 2009).

This position described by Bergman above is underscored by stakeholders' interpretations of estrangement, partiality; leading to syntactic compound through a lack of understanding; and the perception of a lack of independent authority within their own domain. The lack of participation in the strategy narrative may point to strategic drift. The novelty of the revelations made are not in themselves a means of achieving strategic outcomes; but they do go some way to providing remedy to strategists seeking to use strategy conversation more effectively by defining the nature and extent of interpretation of the artefacts that constitute the strategy discourse.

It is a well-worn axiom that the theory of strategy management contains much about strategy analysis, formation, and goal setting; but practically nothing about implementation, which is the only part of the strategic management process that actually matters. The former belongs is the fiefdom of the Clerics, while the latter is the domain of the Proletarians.

"The strategy is about putting those with the requisite skills in position to be most effective. It is not necessary that the individuals are aware of the strategy, merely that they do what is expected of them. And why wouldn't they?" (Henderson 2017).

8.3 Research Contributions

This research study is a re-contextualisation of existing techniques adapted from existing theory and models. Mixed methods research techniques such as Q Methodology as a means of capturing reliably, scientifically and experimentally the subjectivity that exists in strategy discourse (Watts and Stenner 2005). Based upon existing theories and models relating to the knowledge

continuum McAdam and McCreedy (1999); Easterby-Smith, Lyles and Tsang (2008); Stamper (1973); and Probst, Raub and Kai Romhardt (1999) and semiotic theory Peirce (1931; Culler (1986); and Hebert (2006), this study adapts their fields of interest in a new context to explore how participants may adopt a position in strategy discourse through storytelling and narrative (Boje 2001). Their work has been taken by combination to elucidate the nature of the strategy conversation as a means of strategy intervention to facilitate contingency and intervention in determining future strategy artefacts that may guide the strategy narrative. This combination reveals an arrangement that is new and useful proving that it is feasible in a strategy context. The study also shows how this arrangement can be applied in practice making the ideas embodied more tangible, substantive and compelling in providing a new solution to strategy intervention.

8.3.1 Contributions to Methodological Practice

The originality of this work is in the coadunation of knowledge management, strategy and semiotic theory with Q Methodology; situated in the systematic study of subjectivity that exists in the field of strategy discourse (Brown 1996). It answers to the context of strategy implementation, not as an end stage in itself but a systematic process that exists throughout the strategy planning process. This study shows that the key to effective detection of cluster analysis relies on a set of strategy artefacts, which eloquently delineates the narrative capabilities of the study group. Through this set of discourse parameters through a semiotic rationale, the study can help to analyse, predict, evaluate and explain issues related to the strategy conversation.

8.3.2 Contributions of this Study to Theoretical Development

In the field of knowledge management this study goes some way to answering the pleas from Emenalo (2011); and Narayanan and Fahey (1982) and others, in Chapters 1, 2 and 3 of this thesis, who suggested further research for a rationalist and normative view of knowledge management in the development of strategy narrative. Particularly from a human centric locus on the politicised nature of stakeholder engagement with strategy and the discourse that is creates. While (Morin and Gold 2009) argued for further observation on the negotiating process stakeholders engage in from a social constructivist perspective that was adopted by this study. In

the meantime Johnson, Scholes and Whittington (2008) may have contributed considerably to the codification of organisational culture in the field of strategy as practice; this study has sought to challenge the gap identified by Ezzamel and Willmott (2008) and Henderson (2017) who argued that little of value had been done on the implementation of strategy to define the current mode of discourse as one of deflection. This study goes some way to lifting the veil of deceit that currently exists in strategy that practitioners in strategy find hard to acknowledge Ezzamel and Willmott (2008); McCabe (2010); and Hardy and Thomas (2014).

8.3.3 Contributions to Strategy as Practice

The gestation and development of strategy is an intensely people orientated process; and to that end, the success or failure of the strategy is fundamentally reliant on how key stakeholders can participate in the discourse of strategy development (Henderson 2017). While Meznar and Johnson (2005) recognised that stakeholders in strategy participate in gaming the strategy narrative, they do not go on to discuss the roles played and why there may be inconsistency in interpretation of strategy artefacts. Henderson states that much that is currently written about strategy is but an apology for adopting a deflection strategy. This study previously acknowledges the politicised nature of discourse in the strategy narrative and the conflict of seeking advantage for scarce resources that can lead to organisational objectives being displaced by personal objectives (Tarter and Hoy 1998). Husted (2000) discusses such disagreements between individuals but does not describe the dynamics that may give rise to this juxtaposition.

The author of this thesis ventures that the significance of this study is that it goes some way to answering the plea from Gagne (2009) of the need for a more complete diagnosis of strategy narrative intervention, underscored by an observation made by Emenalo (2011) relating to the influence of self-interest of stakeholders. And that strategy game playing is seen as an exercise in deflection to avoid, ignore or circumnavigate the strategy discourse (Henderson 2017).

8.4 Concluding Reflections

This study is the culmination of nearly 20 years of academic study that started with my interest in knowledge management when I was studying for my post-graduate degree. That interest was

driven by the projects I was involved in at the Ordnance Survey, Britain's National Mapping Agency. My involvement in many projects raised my curiosity in the success and failure of projects, initially thought of as poor strategy design, I very quickly realised that it was a people centric imperative that mainly conditioned the outcome of these projects. My academic work on knowledge management went some way to understanding the nature and the impact of knowledge transfer in a social context, but this never really satisfied my inclination that social discourse was a significant patron of success. In part the field of knowledge management theory did provide the answer. Working with similarly minded academics it was realised that knowledge transfer was an entirely human endeavour reliant on the practice of storytelling and narrative in its wider sense. And to understand strategy as practice it was necessary to peel back the veneer of knowledge and reveal its formation akin to peeling off the layers of an onion. To understand knowledge management, researchers ultimately compelled to study the constituent parts of knowledge, essentially the study of symbols through the lens of semiotic theory.

It soon became apparent that the realisation of this aphorism was easier than the realisation of this study, as a consequence I was mandated to study the field of strategy in many forms and more challengingly the field of semiotics; which ultimately led me to Q Methodology that combined to provide a very stretching challenge.

Upon reflection my initial expectations of enquiry into knowledge management and why knowledge management was so difficult in a strategy context were not being met and required further enquiry. It was the realisation that that importance linguistics in transferring knowledge led to the identification of a semiotic explanation that was a key turning point.

It is was surprising that few theories of semiotics in strategy existed, but that did not stop many commentators attesting to the fact that this should be an area of key academic theory development. So, the implication for the researcher was clear, an examination of existing independent, isolated and in some cases sovereign theories that could be rendered by combination into a concourse on the semiotics of strategy. The disadvantage was the arcane nature of semiotic writing based on theories that are nearly 100 years old in some cases,

particularly so as modern teaching in semiotics tends to concentrate on the advertising and media landscape. This study may act as point of reference and a pylon for future research work in strategy as practice.

As this study proceeds towards its conclusion I have ruminated for several years on the semiotic nature of strategy and the symbols that forge its majesty as being akin to totem poles of the indigenous American Indians. Totem poles serve many purposes and their meanings are as varied as the cultures that make them. Some represent stories or important events, each figure on the totem represents part of a story to record history and legends. Figures on a totem pole are not gods to be worshipped. Instead, they represent traits and characteristics each clan or story embodies. There are many other types of totem poles to reflect genealogy erected in front of a homes to represent the ownership, clan or social status; memorial poles in honour of the deceased; mortuary poles are raised in honour of the dead include a small compartment for the ashes of the deceased; and shame poles carved to embarrass and ridicule someone who has done something wrong. The point I raise here is the iconic nature of symbols in these artefacts are no less durable than those discussed here in the semiotics of strategy. So, who would build the totem pole, is it the Clerics of strategy or is it the Proletarians? Whatever the case, it is important for strategy that the semiotics of the artefacts must be well understood in order to intervene successfully in reshaping strategy.

8.5 Further Research and Recommendations

Studies of this kind do not easily vacate the academic landscape free from their own shortcomings and in this regard, there are some observations that may serve to inform future endeavour of this nature. It is suggested that the locus on future strategy research is required to expand on the value of implementation rather than analysis and formation of strategy (Henderson 2017). That said, it is a condition of strategy as narrative that it encompasses the whole strategy planning process and therefore, 'implementation' should be taken to mean the strategy conversation that takes place throughout the process.

Additional work needs to develop the library of variables that are used in the Q Set, particularly the rationale for each variable as justification for inclusion in the Q Set and a closer scrutiny of the alignment of the variables to Peirce's semiotic triad.

Whilst the respondent base may be regarded as satisfactory in representing the views of the study group in terms of the Q Sort, what the researcher did not anticipate was the difficulty in realising the same level of response to Part Two of the research methodology as previously elaborated. It is felt that Part Two type research tools do have merit, particularly in combination with a Part One type research tool and future research is recommended not to underestimate the difficulty in gaining returns especially from the respondent base, even if it constitutes members of a senior management team.

8.6 Conclusion

The basis of semiotics was summed up quite cleverly by Umberto Eco when asked: ''What is a sign?'' and answered: ''That which can be used to lie''(Eco 1977). In framing his answer in this way, he emphasised the arbitrary and conventional (not representational) nature of the sign, using the basic tenet of linguistics, that differentiates between the two aspects of the sign: the signified and the signifier. In principle, no sign can exist without convention and a community within which that convention is established and maintained. Even if it is a community of two, with only a few signs between them. All signs are social constructs.

The overall processes that shape objectivist or interpretivist approaches are basically the same. In both there is a community that establishes and maintains processes and signs for particular kinds of meanings that it uses. Where these approaches differ is in the aims and objectives of these two communities. What emerges is a picture of different types of semiotic activity and function, each tied into a different community, each with its own particular epistemological requirements. As "Language disguises thought" (Wittgenstein, Pears and Russell 2008).

The fundamental tenets of semiotics, linguistics and linguistic philosophy have been applied to key epistemological issues of the way actors define, acquire, manage and transfer knowledge

through strategy discourse. Strategy discourse through storytelling and narrative is the very conduit through which actors can approximate and determine by further enquiry the position that participants take as they play the strategy game. This study provides a theoretical foundation for the determination of taking a position and the analysis of the various communities, functions, transcriptions, and articulations of each of the phases of the strategy life cycle. It also provides the basis for a re-examination and a resolution of the epistemological confusions that arise from attempts to separate data complexity from meaning making (Williams 2008) . This framework also provides the basis for separating out the valuable functions of both the objectivist and the interpretivist approaches to knowledge and the strategy community, so that they can be incorporated into a single, coherent model, rather than being seen as competitive and contradictory.

8.7 Chapter Summary

In Chapter Eight the discussion reviewed the meeting of aims, objectives and research questions. In this regard the chapter developed a philosophy of critical evaluation towards this study to balance the overarching academic endeavour upon which this study is based. These contentions were used to close the dissertation by both summarising the key contributions and pointing towards further research studies emanating from the research study findings. This future research proposed could develop the claims made throughout and the result will form the basis for future testable hypotheses that may be used to test under further scrutiny the contentions made, perhaps in different contexts. This very much reflects the approach discussed in Chapter Five, in terms of developing theory through a variety of different contexts to test and establish the claims being made. Therefore, in addition, to enhancing the knowledge base of storytelling and narrative in strategy, through the contributions discussed in this chapter, the following contentions will add to the debate on knowledge management; discourse and rhetorical analysis; and strategy as practice in relation to the relative importance of future study on the semiotics of strategy.

Bibliography

AL-AMOUDI, I. and H. WILLMOTT, 2011. Where Constructionism and Critical Realism Converge: Interrogating the Domain of Epistemological Relativism. *Organization Studies,* 32(1), 27-46

ALEXANDER, M., 2000. Codes and Contexts
practical semiotics for the qualitative researcher. *Market Research Society Conference.* MRS, pp.139-146

ALSAATY, F.M. and M.H. HARRIS, 2009. Innovation Event: An Insight into the Occurrence of Innovation. *The Business Review,* 14(1), 292-299

ANDREWS, K.M. and B.L. DELAHAYE, 2000. Influences on Knowledge Processes in Organisational Learning: The Psychological Filter. *Journal of Management Studies,* 37(6), 799-810

ARGYRIS, C. and D.A. SCHÖN, 1996. *Organizational learning II.* Reading: Addison-Wesley

ASNAWI, A.L., A.M. GRAVELL and G.B. WILLS, 2012. Factor Analysis: Investigating Important Aspects for Agile Adoption in Malaysia. 2012 Agile India: IEEE, pp.60-63

ASTLEY, W., 1985. Administrative Science as Socially Constructed Truth. *Administrative Science Quarterly,* 30(4), 497-513

ATKIN, A., 2008. Peirce's Final Account of Signs and the Philosophy of Language. *Transactions of the Charles S. Peirce Society,* 44(1), 63-85

ATKIN, A., 2008. Peirce's final account of signs and the philosophy of language. *Transactions of the Charles S. Peirce Society,* 44(1), 23

BALOGUN, J. *et al.,* 2014. Placing Strategy Discourse in Context: Sociomateriality, Sensemaking, and Power. *Journal of Management Studies,* 51(2), 175-201

BALOGUN, J., P. JARZABKOWSKI and E. VAARA, 2011. Selling, Resistance and Reconciliation: A Critical Discursive Approach to Subsidiary Role Evolution in Mnes. *Journal of International Business Studies,* 42, 765-786

BARDON, T., A.D. BROWN and S. PEZÉ, 2017. Identity regulation, identity work and phronesis. *Human Relations,* 70(8), 940-965

BARDON, T. and E. JOSSERAND, 2018. Management innovations from a foucauldian perspective: Time to take action. *M@n@gement,* 21(4), 1244-1263

BASHATAH, L.S., 2016. Q-methodology: What and how? *IOSR Journal of Research & Method in Education (IOSR-JRME),* 6(5), 37-43

BARRY, D. and M. ELMES, 1997. *Strategy retold: toward a narrative view of strategic discourse.* , pp.429-452

BARTHES, R., 2013. *Mythologies.* First American paperback edition ed. New York: Hill and Wang

BASKERVILLE, R. and A. DULIPOVICI, 2006. The Theoretical Foundations of Knowledge Management. *Knowledge Management Research and Practice,* 4, 83-104

BASU, E., R.K. PRADHAN and H.R. TEWARI, 2017. Impact of organizational citizenship behavior on job performance in Indian healthcare industries. *International Journal of Productivity and Performance Management,* 66(6), 780-796

BEER, M. and N. NOHRIA, 2009. Cracking the code of change. *The principles and practice of change,* , 63-73

BERGMAN, M., 2009. *Peirce's Philosophy of Communication.* London, GB: Continuum

BEYNON-DAVIES, P., 2010. Dances with bees: Exploring the relevance of the study of animal communication to informatics. *International Journal of Information Management,* 30(3), 185-198

BLACKMAN, D., 2001. *Is Knowledge Acquisition and Transfer Possible?*2001]. Available from: http://www.mngt.waikato. ac.nz/ Research/ejrot/Vol7_1/Vol7_1articles/blackman.asp.

BLACKMAN, D. and S. HENDERSON, 2003. *When becoming a Learning Organisation is a dangerous thing.* New World

BLACKMAN, D. and S. HENDERSON, 2005. Know ways in knowledge management. *The Learning Organization,* 12(2), 152-168

BLACKMAN, D. and G.C.M. SMITH, 2004. Knowledge Management Challenges across Nations. *Knowledge Management International Conference (KMICe2004) – Penang, Malaysia.* Universiti Utara Malaysia,

BLACKMAN, D., G.C.M. SMITH and B. GOOD, 2003. Knowledge Sharing and Organisational Learning: The Impact of Social Architecture at Ordnance Survey. *Journal of Knowledge Management Practice,* 4, 1-18

BLAIKIE, N., 2018. *Designing Social Research.* 2nd ed. Cambridge: Polity

BOEHM, B. *et al.,* 1999. *The MBASE Life Cycle Architecture Milestone Package - No Architecture Is An Island.*

BOJE, D.M., 1995. Stories of the Storytelling Organization: A Postmodern Analysis of Disney As "Tamara-Land". *Academy of Management Journal,* 38(4), 997-1035

BOJE, D.M., 2001. *Narrative methods for organizational and communication research.* Thousand Oaks [u.a.]: Sage Publications

BONN, I. and A. PETTIGREW, 2009. Towards a dynamic theory of boards: An organisational life cycle approach. *Journal of Management and Organization,* 15(1), 2-16

BOTAN, C.H. and F. SOTO, 1998. A semiotic approach to the internal functioning of publics. *Public Relations Review,* 24(1), 21-44

BRAGANZA, A., R. HACKNEY and S. TANUDJOJO, 2007. Organizational knowledge transfer through creation, mobilization and diffusion: a case analysis of InTouch within Schlumberger. *Information Systems Journal,* 19(5), 499-522

BRINT, 2001. *Knowledge Management & Organizational Learning* 2001]. Available from: http://www.brint.com/OrgLrng.htm.

BROWN, A.D. and M. HUMPHREYS, 2006. Organizational Identity and Place: A Discursive Exploration of Hegemony and Resistance. *Journal of Management Studies,* 43(2), 231-257

BROWN, A.D. and E.R. THOMPSON, 2013. A narrative approach to strategy-as-practice. *Business History,* 55(7), 1143-1167

BROWN, S., 1980. *Political subjectivity.* New Haven: Yale Univ. Press

BROWN, S.R., 1996. Q Methodology and Qualitative Research. *Qualitative Health Research,* 6(4), 561-567

BRYMAN, A., 2006. Integrating quantitative and qualitative research: how is it done? *Qualitative Research,* 6(1), 97-113

BUXTON, D., 1990. *From the Avengers to Miami vice: form and ideology in television series.* England: Manchester University Press

CAIRNS, G., P. GOODWIN and G. WRIGHT, 2016. A decision-analysis-based framework for analyzing stakeholder behaviour in scenario planning.

CATTELL, R.B., 1966. The Scree Test For The Number Of Factors. *Multivariate Behavioral Research,* 1(2), 245-276

CHANDLER, D., 1998. *Semiotics for Beginners* Available from: http://visual-memory.co.uk/daniel/Documents/S4B/

CHANDLER, D., 2007. *Semiotics: The Basics.* 2nd ed. ed. London: Routledge Ltd

CHANDLER, D., 2015. A World without Causation: Big Data and the Coming of Age of Posthumanism. *Millennium - Journal of International Studies,* 43(3), 833-851

CHANDLER, D., 2017. *Semiotics.* Third edition ed. London ; New York: Routledge, Taylor & Francis Group

CHESLEY, J.A., 1999. *Transforming an Organization: Using Models to Foster a Strategic Conversation.* Berkeley, Calif. : Graduate Schools of Business Administration University of California Berkeley and Los Angeles

CHETTY, P. and GOEL, E., 2015. *Data analysis Procedure in SPSS* [viewed 01-Mar- 2019]. Available from: https://www.projectguru.in/publications/interpretation-of-factor-analysis-using-spss/

CHOULIARAKI, L. and N. FAIRCLOUGH, 2010. Critical Discourse Analysis in Organizational Studies: Towards an Integrationist Methodology. *Journal of Management Studies,* 47(6), 1213-1218

CLAUSEWITZ, C.V., 1832. *Vom Krieg (On War).* London: Penguin Books

CLEGG, S. and G. PALMER, 1996. *The politics of management knowledge.* London: Sage

CLUTTERBUCK, D. and D. MEGGINSON, 1999. Emotional Intelligence in Executive Mentoring. Cambridge University,

COBLEY, P., 2010. *The Routledge Companion to Semiotics.* First published ed. London; New York: Routledge

COLLINGE, W. and C. HARTY, 2014. Stakeholder interpretations of design: semiotic insights into the briefing process. *Construction Management and Economics,* 32(7-8), 760-772

COLLIS, J. and R. HUSSEY, 2014. *Business Research.* 4th ed. Basingstoke: Palgrave

CONNER, P.D., A.J. KINICKI and B.W. KEATS, 1994. Integrating organizational and individual information processing perspectives on choice. *Organizational Science,* 5(3), 14

COOK, G., 2003. *Theœ discourse of advertising.* 2. ed., repr. ed. London [u.a.]: Routledge

COOK, S.D.N. and J.S. BROWN, 1999. Bridging Epistemologies: The Generative Dance Between Organizational Knowledge and Organizational Knowing. *Organization Science,* 10(4), 381-400

CORNELISSEN, J.P., R. HOLT and M. ZUNDEL, 2011. The Role of Analogy and Metaphor in the Framing and Legitimization of Strategic Change. *Organization Studies,* 32

CORTADA, J. and J.A. WOODS, 2013. *The Knowledge Management Yearbook 2000-2001.* Florence: Taylor and Francis

COSTELLO, A.B. and J. OSBORNE, 2005. Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation,* 10(7), 1-9

COVINGTON, B.J.J., 2012. *Sociocultural integration of acquisitions as experienced by veteran organizational development consultants A qualitative exploratory inquiry.* Capella University

CRAFFORD, G.J. and J.J. SMALLWOOD, 2007. Clients' views on quantity surveying competencies. *Acta Structilia,* 14(1), 33

CULLER, J.D., 1986. *Saussure.* 2. ed., rev. ed. London [u.a.]: Fontana Press

CUMMINGS, S. and D. WILSON, 2003. Images of Strategy. In: S. CUMMINGS and D. WILSON, eds. *Images of Strategy.* Oxford: Blackwell, pp.1-40

CZARNITZKI, D. and A. WASTYN, 2009. Does Professional Knowledge Management Improve Innovation Performance at the Firm Level? *SSRN Working Paper Series,* (Discussion Paper No. 09-067),

DAINTY, A., D. MOORE and M. MURRAY, 2006. *Communication in Construction Theory and Practice.* Oxford: Taylor and Francis

DANESI, M., 2004. *Messages, signs, and meanings.* 3. ed. ed. Toronto: Canadian Scholars' Press

DAVENPORT, T.H. and L. PRUSAK, 2000. *Working knowledge.* in paperback ed. Boston, Mass: Harvard Business School Press

DE-LONG, D.W. and L. FAHEY, 2000. Diagnosing Cultural Barriers to Knowledge Management. *The Academy of Management Executive,* 14(4), 113-127

DEMEREST, M., 1997. Understanding Knowledge Management. *Journal of Long Range Planning,* 30(3), 374-384

DENTE, B., 2014. *Understanding Policy Decisions* Available from: https://doi.org/10.1007/978-3-319-02520-9

DESOUZA, K.C. and T. HENSGEN, 2005. *Managing information in complex organizations.* Armonk, New York [u.a.]: Sharpe

DICK, P. and D.G. COLLINGS, 2014. Discipline and punish? Strategy discourse, senior manager subjectivity and contradictory power effects. *Human Relations,* 67(12), 1513-1536

DODGE, T.A., 1904. *Napoleon; a History of the Art of War: From the beginning of the Peninsular war to the end of the Russian campaign, with a detailed account of the Napoleonic wars.*

DUGAS, G., 2018. *Middle Managers Working beyond Senior Management's Expectations: A Phenomenological Study of the Managed Healthcare Industry in Southern California*, Bradman University, California

EARL, M., 2001. Knowledge management strategies: Toward a taxonomy. *Journal of Management Information Systems,* 18(1), 215-233

EASTERBY-SMITH, M., 1997. Disciplines of Organizational Learning: Contributions and Critiques. *Human Relations,* 50(9), 1085-1113

EASTERBY-SMITH, M., M. LYLES and E. TSANG, 2008. Inter-Organizational Knowledge Transfer: Current Themes and Future Prospects. *Journal of Management Studies,* 45(4), 677-690

EASTERBY-SMITH, M., 1999. *Organizational learning and the learning organization.* Reprinted ed. London [u.a.]: Sage

ECO, U., 1977. *Zeichen.* 1. Aufl. ed. Frankfurt a.M: Suhrkamp

EDEN, C., 1988. Cognitive mapping. *European Journal of Operation Research,* 36(1), 1-13

EDEN, S., A. DONALDSON and G. WALKER, 2005. Structuring Subjectivities? Using Q Methodology in Human Geography. *Area,* 37(4), 413-422

EDMONDSON, A.C., 2008. The competitive imperative of learning. *Harvard business review,* , 60-67

EINAUDI, G., 1977. *Microfiseca del Poetere.* 3rd ed. Torino:

EISENHARDT, K.M., 2008. Speed and strategic choice. *California management review,* 50(2), 102-116

EISENHARDT, K.M., J.L. KAHWAJY and L.J. BOURGEOIS, 1998. Conflict and strategic choice: How top management teams disagree. *Director,* Mar 1, 42-62

ELKJAER, B., 2000. Learning and getting to know: the case of knowledge workers. *Human Resource Development International,* 3(3), 343-359

EMENALO, C., 2011. Towards a Human-centric Theory of the Firm. *Business schools under fire,* , 192-211

ENGLISH HERITAGE, 2001. *Social Architecture Thesaurus* 2003]. Available from: http://www.rchme. gov.uk/thesaurus/ styles/c178164.htm

EVANS, N. and M. EASTERBY-SMITH, 2000. *The Nature of Organizational Knowledge.* London: Sage

EZZAMEL, M. and H. WILLMOTT, 2008. Strategy as Discourse in a Global Retailer: A Supplement to Rationalist and Interpretive Accounts. *Organization Studies,* 29(2), 191-217

EZZAMEL, M. and H. WILLMOTT, 2010. Strategy and strategizing: A poststructuralist perspective. *The Globalization of Strategy Research.* Emerald Group Publishing Limited, pp.75-109

FAIRCLOUGH, N., 2003. *Analysing Discourse.* GB: Routledge Ltd

FELDMAN, M.S. and B.T. PENTLAND, 2003. Reconceptualizing Organizational Routines as a Source of Flexibility and Change. *Administrative Science Quarterly,* 48(1), 94-118

FENTON, C. and A. LANGLEY, 2011. Strategy as Practice and the Narrative Turn. *Organization Studies,* 32(9), 1171-1196

FERRETTI, V., 2016. From stakeholders analysis to cognitive mapping and Multi-Attribute Value Theory: An integrated approach for policy support. *European Journal of Operational Research,* 253(2), 524-541

FIELD, A., 2009. *Discovering statistics using SPSS.* Los Angeles: SAGE

FISHER, W.R., 1989. Clarifying the narrative paradigm. *Communication Monographs,* 56(1), 55-58

FONTANILLE, J., 2012. *The Semiotics of Discourse.* New York: Peter Lang

FOUCAULT, M., 1980. *Power, Knowledge.* 1st ed. New York: Harvester Press

FOUCAULT, M., 1979. *Discipline and punish.* New York: Vintage Books

FRACZKIEWICZ-WRONKA, A. and K. SZYMANIEC, 2012. Resource based view and resource dependence theory in decision making process of public organisation - research findings. *Management,* 16(2), 16-29

FRANKLIN, S., C. LURY and J. STACEY, 1991. Feminism and cultural studies: pasts, presents, futures. *Media, Culture & Society,* 13(2), 171-192

FRASER, C. and A. ZARKADA-FRASER, 2003. Investigating the effectiveness of managers through an analysis of stakeholder perceptions. *Journal of Management Development,* 22(9), 762-783

FREEMAN, R.E. and D.L. REED, 1983. Stockholders and Stakeholders: A New Perspective on Corporate Governance. *California Management Review,* 25(3), 88-106

FRENCH, T., 2009. Virtual Organisational Trust Requirements: can Semiotics Help Fill the Trust Gap?. *International Journal of Intelligent Information Technologies,* 5(2), 1-16

GÄCHTER, S., 2005. *Blackwell handbook of judgment and decision making: Behavioral Game Theory.* 1. publ., 2. print. ed. Oxford: Blackwell Pub

GAGNE, 2001. *Essentials of Learning for Instruction *2001]. Available from: www.ge.com/operating_system/ architecture.htm

GAGNÉ, M. and E. DECI, 2005. Self-Determination Theory and Work Motivation. *Journal of Organizational Behavior,* 26(4), 331-362

GAGNE, M., 2009. A model of knowledge-sharing motivation. *Human Resource Management,* 48(4), 571-589

GAGNE, M., 2009. A model of knowledge-sharing motivation. *Human Resource Management,* 48(4), 571-589

GAZENDAM, H.W.M. and K. LIU, 2005. *The Evolution of Organisational Semiotics - A Brief Review of the Contribution of Ronald Stamper.* Dordrecht: Kluwer Academic Publishers

GERGEN, K.J., 1999. *An invitation to social construction.* London: Sage

GOMES, J. and M. ROMÃO, 2014. Gaining competitive advantage through the Balanced Scorecard. pp.5046-5055

GONZALEZ, R. and M. MARTINS, 2014. Knowledge Management: An Analysis from the Organizational Development. *Journal of Technology Management & Innovation,* 9(1), 131-147

GREEN, S.E., 2004. A Rhetorical Theory of Diffusion. *The Academy of Management Review,* 29(4), 653-669

GREENE, J., 2007. *Mixed methods in social inquiry.* 1. ed. ed. San Francisco, CA: Jossey-Bass

GREENE, J., V. CARACELLI and W. GRAHAM, 1989. Toward a Conceptual Framework for Mixed-Method Evaluation Designs. *Educational Evaluation and Policy Analysis,* 11(3), 255-274

GRINYER, P., S. AL-BAZZAZ and M. YASAI-ARDEKANI, 1986. Towards a Contingency Theory of Corporate Planning: Findings in 48 U.K. Companies. *Strategic Management Journal,* 7(1), 3-28

GUPTA, A.K. and V. GOVINDARAJAN, 2000. Knowledge flows within multinational corporations. *Strategic Management Journal,* 21(4), 473-496

GUTH, W. and I. MACMILLAN., 1986. Strategy Implementation Versus Middle Management Self-interest. *Strategic Management Journal (1986-1998),* 7(4), 313-328

HAGAN, K. and S. WILLIAMS, 2016. Oceans of Discourses: Utilizing Q Methodology for Analyzing Perceptions on Marine Biodiversity Conservation in the Kogelberg Biosphere Reserve, South Africa. *Frontiers in Marine Science,* 3

HANDY, C.B., 1989. *The Age of Unreason.* Repr. ed. London u.a: Business Books

HARDY, C. and R. THOMAS, 2014. Strategy, Discourse and Practice: The Intensification of Power. *Journal of Management Studies,* 51(2), 320-348

HARRINGTON, S., S. WARREN and C. RAYNER, 2015. Human Resource Management practitioners' responses to workplace bullying: Cycles of symbolic violence. *Organization,* 22(3), 368-389

HAZEN, M.A., 1993. Towards Polyphonic Organization. *Journal of Organizational Change Management,* 6(5), 15-26

HEBERT, L., 2006. *« The Semiotic Square », in Louis Hébert (dir.), Signo [online], Rimouski (Quebec),* Available from: http://www.signosemio.com/greimas/semiotic-square.asp

HENDERSON, S.J., 2017. Strategy as Nonsense: Strategies for Hunting the Snark. *Journal of Organisational Change Management,* 30(2), 232-242

HENDERSON, S. and B. WINK, 2018. For Whom? Identifying Worldview in Realist Evaluation using Q Methodology.

HILL, R.C. and M. LEVENHAGEN, 1995. Metaphors and mental models: Sensemaking and Sensegiving in Innovative and Entrepreneurial Activities. *Journal of Management,* 21(6), 1057-1074

HOGG, M. and G. VAUGHAN, 2017. *Social Psychology.* Harlow, United Kingdom: Pearson Education Limited

HUGHES, M.J., 2012. *Researching Behaviour: A Q Methodological Exploration of The Position Of The Young Person As Researcher*, University of Sheffield

HUSTED, B.W., 2000. A Contingency Theory of Corporate Social Performance. *Business and Society,* 39(1), 24-48

INKPEN, A.C., 2000. Learning Through Joint Ventures: A Framework Of Knowledge Acquisition. *Journal of Management Studies,* 37(7), 1019-1044

INKPEN, A.C. and E.W.K. TSANG, 2005. Social Capital, Networks, and Knowledge Transfer. *The Academy of Management Review,* 30(1), 146-165

INKPEN, A. and N. CHOUDHURY, 1995. The Seeking of Strategy Where it is Not: Towards a Theory of Strategy Absence. *Strategic Management Journal,* 16(4), 313-323

JABRI, M., A.D. ADRIAN and D. BOJE, 2008. Reconsidering the role of conversations in change communication; A contribution based on Bakhtin. *Journal of Organizational Change Management,* 21(6), 667-685

JACKSON, R.H. and G. SØRENSEN, 2006. *Introduction to international relations: theories and approaches* 3rd Revised ed. Oxford University Press

JAMES ESTRIN, 2015. Kodak's First Digital Moment. In: *https://lens.blogs.nytimes.com.* Aug 12, Available from: https://lens.blogs.nytimes.com/2015/08/12/kodaks-first-digital-moment/

JANIS, I.L. and L. MANN, 1977. *Decision making: A psychological analysis of conflict, choice, and commitment.* New York, NY: Free Press

JARZABKOWSKI, P., 2004. Strategy as Practice: Recursiveness, Adaptation, and Practices-in-Use. *Organization Studies,* 25(4), 529-560

JARZABKOWSKI, P. and R. WHITTINGTON, 2008. A strategy-as-practice approach to strategy research and education. *Journal of management inquiry,* 17(4), 282-286

JASTROCH, N. and T. MARLOWE, 2010. Knowledge Transfer in Collaborative Knowledge Management: A Semiotic View. *Journal of Systemics, Cybernetics and Informatics,* 8(6), 6-11

JELENC, L., 2009. *The Impact of Strategic Management Schools and Strategic Thinking on The Performance of Croatian Entrepreneurial Practice*, University of Ljubljana Faculty of Economics

JENSEN, K., 1995. *The social semiotics of mass communication.* 1. publ. ed. London u.a: Sage

JESSOP, B., 2002. *The Future of the Capitalist State.* 1. publ. ed. Cambridge: Polity

JILL COLLIS and ROGER HUSSEY, 2017. *Business Research.* Fourth edition. ed. Red Globe Press

JOHNSON, B. and L.B. CHRISTENSEN, 2017. *Educational research.* Sixth edition, international student edition ed. Los Angeles ; London ; New Delhi ; Singapore ; Washington DC ; Melbourne: SAGE

JOHNSON, D.M., K.E. HALVERSON and B. SOLOMON, 2009. Beliefs on Climate Change and the Impact on Firms' Operations *20th Annual International Conference.* Orlando, FL: Conference Proceedings—Production and Operations Management Society (POMS),

JOHNSON, G., K. SCHOLES and R. WHITTINGTON, 2008. *Exploring corporate strategy.* 8. ed. ed. Harlow [u.a.]: Financial Times Prentice Hall

JOHNSON, I., 2006a. *Strategic Conversation: Defining, Measuring and Applying the Construct in Organisations*, Griffith University. School of Psychology

JOHNSON, I., 2006b. *Strategic Conversation: Defining, Measuring and Applying the Construct in Organisations*, Griffith University. School of Psychology

JOLLIFFE, I.T., 1972. Discarding Variables in a Principal Component Analysis. I: Artificial Data. *Journal of the Royal Statistical Society. Series C (Applied Statistics),* 21(2), 160-173

JORGENSEN, K.M. and D.M. BOJE, 2006. Conceptualising intellectual capital as language game and power/Commentary: Time, place and mind of intellectual capital: on Jørgensen's "Conceptualising intellectual capital as language game and power". *Journal of Intellectual Capital,* 7(1), 78-92

KAISER, H.F., 1960. The Application of Electronic Computers to Factor Analysis. *Educational and Psychological Measurement,* 20(1), 141-151

KAKIHARA and SORENSON, 2001. Exploring Knowledge Emergence. *Conference on Managing Knowledge: Conversations and Critiques.*

KAMAL, S., M. KOCÓR and M. GRODZINSKA-JURCZAK, 2014. Quantifying Human Subjectivity Using Q Method: When Quality Meets Quantity. *Qualitative Sociology Review,* 10(3)

KAMAU, C. and D. HARORIMANA, 2008. Does Knowledge Sharing and Withholding of Information in Organizational Committees Affect Quality of Group Decision Making? *9th European Conference on Knowledge Management.* pp.341-348

KAPLAN, R.S. and D.P. NORTON, 1996. Strategic Learning & the Balanced Scorecard. *Strategy & Leadership,* 24(5), 18-24

KAPLAN, R.S. and D.P. NORTON, 2007. Using the balanced scorecard as a strategic management system. *Harvard Business Review,* Jul 1, 150

KAY, J.A., 1993. *Foundations of corporate success.* 1. publ. ed. Oxford u.a: Oxford Univ. Press

KETOKIVI, M., 2006. Elaborating the Contingency Theory of Organizations: The Case of Manufacturing Flexibility Strategies. *Production and Operations Management,* 15(2), 215-228

KEYHANI, M., 2011. Doubtful Decision Making: Engaging Uncertainty and Surprise With Abductive Reasoning. *54th Annual Conference of the Administrative Sciences Association of Canada (ASAC).* pp.1-19

KIM, D.H., 1993. The link between individual and organizational learning. *Sloan Management Review,* 35(1), 37-50

KNIGHTS, D., 1992. Changing Spaces: The Disruptive Impact of a New Epistemological Location for the Study of Management. *The Academy of Management Review,* 17(3), 514-536

KNIGHTS, D. and G. MORGAN, 1991. Corporate Strategy, Organizations, and Subjectivity: A Critique. *Organization Studies,* 12(2), 251-273

KOGUT, B. and U. ZANDER, 1992. Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology. *Organization Science,* 3(3), 383-397

KRISHNA KUMAR, S.P. and V. NAGAJOTHI, 2018. A Study on Medium Net worth Truck Operators Investment Avenues of
Savings Plan with Special Reference to New Delhi. *International Journal of Applied Engineering Research,* 13(10), 7424-7428

KRIVOKAPIC-SKOKO, B. and G. O'NEILL, 2011. Beyond the qualitative-quantitative distinction: Some innovative methods for business and management research. *International Journal of Multiple Research Approaches,* 5(3), 290-300

LAINE, P. and E. VAARA, 2007. Struggling over subjectivity: A discursive analysis of strategic development in an engineering group. *Human Relations,* 60(1), 29-58

LAKOFF, G. and M. JOHNSON, 1980. *Metaphors we live by.* Chicago, Ill. [u.a.]: Univ. of Chicago Press

LANGHOLZ LEYMORE, V., 1975. *Hidden Myth: Structure and Symbolism in Advertising.* London: Heinemann

LAVALLO, D. and O. SIBONY, 2010. The case for behavioural strategy. *McKinsey Quarterly,* March 2010, 1-16

LAVERGNE, R. and R.L. EARL, 2006. Knowledge Management: A Value Creation Perspective. *Journal of Organizational Culture, Communication and Conflict,* 10(2), 43-60

LAWES, R., 2002. Demystifying Semiotics: Some Key Questions Answered. *International Journal of Market Research,* 44(3), 1-10

LEE-KELLEY, L. and D. BLACKMAN, 2003. *The implications of Mental Models upon Team Development for HR Managers.* Limerick, Ireland:

LEHMANN-WILLENBROCK, N. *et al.,* 2017. Understanding Positivity Within Dynamic Team Interactions: A statistical discourse analysis. *Group & Organization Management,* 42(1), 39-78

LEHRER, N. and G. SNEEGAS, 2018. Beyond Polarization: Using Q Methodology to Explore Stakeholders' Views on Pesticide Use, and Related Risks for Agricultural Workers, in Washington State's Tree Fruit Industry. *Agriculture and Human Values,* 35(1), 131-147

LEVINE, L., 2001. Integrating Knowledge and Processes in A Learning Organization. *Information Systems Management,* 18(1), 1-33

LONCAR, M., 2017. The Impact of Strategic Management and Strategic Thinking Approaches on Business Performance of Companies. *European Project Management Journal,* 7(1), 85-98

LUCAS, G.H. and L.G. GRESHAM, 1985. Power, conflict, control, and the application of contingency theory in marketing channels. *Academy of Marketing Science,* 16(3), 25-38

LUKOSCH, S., M. KLEBL and T. BUTTLER, 2011. Utilizing verbally told stories for informal knowledge management. *Group decision and negotiation,* 20(5), 615-642

LUTHANS, F. and T.I. STEWART, 1978. The reality or illusion of a general contingency theory of management: A response to the Longenecker and Pringle critique. *The Academy of Management Review,* 3(3), 683-687

MALHOTRA, Y., 1998. Deciphering the Knowledge Management Hype. *The Journal for Quality & Participation,* July/August 1998(Special issue on Knowledge Management), 1-31

MANTERE, S. and E. VAARA, 2008. On the Problem of Participation in Strategy: A Critical Discursive Perspective. *Organization Science,* 19(2), 341-358

MARSHAK, R.J., 2002. Changing the Language Game: how New Contexts and Concepts are Challenging the Ways we Think and Talk About Organizational Change. *Briefing in Entrepreneurial Finance,* 11(5 (Special Issue:Rethinking Organizational Change)), 237-286

MARTIN, L.H., 1988. *Technologies of the self.* London: Tavistock

MASON, K.J. and S. LEEK, 2008. Learning to Build a Supply Network: An Exploration of Dynamic Business Models. *Journal of Management Studies,* 45(4), 774-799

MCADAM, R. and S. MCCREEDY, 1999. A Critical Review of Knowledge Management Methods. *The Learning Organization,* 6(3), 91-100

MCCABE, D., 2010. Strategy-as-Power: Ambiguity, Contradiction and the Exercise of Power in a UK Building Society. *Organization,* 17(2), 151-175

MCCARTHY, B., 2006. Building and Sustaining Trust in Networks: Lessons from the Performing Arts. *Irish Marketing Review,* 18(1), 47-57

MCELROY, M.W., 2002. Second-Generation Knowledge Management. *The New Knowledge Management: Complexity, Learning, and Sustainable Innovation.* Routledge, pp.31-60

MCGIVERN, Y., 2009. *Theœ practice of market research.* 3. ed. ed. Harlow, England [u.a.]: Prentice Hall

MCHUGH, N. *et al.,* 2019. Who knows best? A Q Methodology study to explore perspectives of professional stakeholders and community participants on health in low-income communities. *BMC Health Services Research,* 19(1), 1-13

MCKEOWN, B. and D.B. THOMAS, 2013. *Q Methodology.* 2. ed. ed. Los Angeles [u.a.]: Sage

MENDELOW, A.L., 1981. Environmental Scanning-The Impact of the Stakeholder Concept. *International Conference on Information Systems.* ICIS 1981 Proceedings, pp.20-32

MEYER, J. and B. ROWAN, 1977. Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology,* 83(2), 340-363

MEZNAR, M.B. and J.H. JOHNSON, 2005. Business-Government Relations Within a Contingency Theory Framework: Strategy, Structure, Fit, and Performance. *Business & Society,* 44(2), 119-143

MILES, R.E. and C.C. SNOW, 1992. Causes of Failure in Network Organizations. *California Management Review,* 34(4), 53-72

MILES, R.E. *et al.,* 1997. Organizing in the knowledge age: Anticipating the cellular form. *Academy of Management Executive,* 11(4), 7-20

MILES, R.E. *et al.,* 1978. Organizational strategy, structure, and process. *The Academy of Management Review,* 3(3),

MILLER, S., 1990. Foucault on Discourse and Power. *Theoria: A Journal of Social and Political Theory,* (76), 115-125

MINK, L.O., 1978. Narrative Form as a Cognitive Instrument. *Full: In (pp. 129-49) Canary.* U of Wisconsin P, pp.129

MINTZBERG, H., 1979. Patterns in Strategy Formation. *International Studies of Management & Organization,* 9(3), 67-86

MINTZBERG, H., 1994. The Fall and Rise of Strategy Planning. *Harvard Business Review,* January-February(Reprint Number: 94107),

MINTZBERG, H., B.W. AHLSTRAND and J. LAMPEL, 1998. *Strategy Safari: A Guided Tour Through the Wilds of Strategic Management* London [u.a.]: Prentice Hall

MITCHELL, M., B. AGLE and D. WOOD, 1997. Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review,* 22(4), 853-886

MOLTKE, HELMUTH, GRAF VON, 1800-1891, 1993. *Moltke on the art of war : selected writings.* United States:

MORDEN, T., 1997. Leadership as Vision. *Management Decision,* 35(9-10), 664-673

MORGAN, G., 1986. *Images of organization.* 1. print. ed. Beverly Hills, Calif. <>: Sage

MORIN, J.F. and R. GOLD, 2009. Consensus-Seeking, Distrust, and Rhetorical Entrapment: The WTO Decision on Access to Medicines. *SSRN eLibrary,*

MOURITSEN, J., 2004. Measuring and intervening: how do we theorise intellectual capital management? *Journal of Intellectual Capital,* 5(2), 257-267

MUKHERJEE, N. *et al.,* 2015. The Delphi technique in ecology and biological conservation: applications and guidelines. *Methods in Ecology and Evolution,* 6(9), 1097-1109

NARAYANAN, V.K. and L. FAHEY, 1982. The micro-politics of strategy formulation. *Academy of Management. The Academy of Management Review,* 7(1), 25-34

NARDI, B A., WHITTAKER, S., SCHWARZ,H., 2000. It's not what you know it's who you know. *First Monday,* 5(5),

NASSERI, T., *Knowledge Leverage: The Ultimate Advantage* 2001]. Available from: www.brint.com/ papers/submit/nasseri.htm.

NCSS, 2019. *NCSS Statistical Software* [viewed 14-Jan- 2019]. Available from: https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Factor_Analysis.pdf

NEDERHAND, J. *et al.,* 2019. The Governance of Self-organization: Which Governance Strategy do Policy Officials and Citizens Prefer? *Policy Sciences,* 52(2), 233-253

NEILL, S. and G.M. ROSE, 2007. Achieving adaptive ends through equivocality: A study of organizational antecedents and consequences. *Journal of Business Research,* 60(4), 305-313

NOBRE, A., 2019. *The foundations of the Semiotic Learning Perspective - conceptually innovating Organisational Learning.* Setubal, Portugal: Escola Superior de Ciências Empresariais do Instituto Politécnico de Setúbal Campus do IPS, EstefanilhaAvailable from: https://www.researchgate.net/publication/228745445_The_foundations_of_the_Semiotic_Learning_Perspective-conceptually_innovating_Organisational_Learning

ODELL, J.S. and S.K. SELL, 2009. *Reframing the issue: the WTO coalition on intellectual property and public health, 2001.* Cambridge : Cambridge University Press

OGILVIE, M. and K. MIZERSKI, 2011. Using Semiotics in Consumer Research to Understand Everyday Phenomena. *International Journal of Market Research,* 53(5), 651-668

OSGOOD, C., 1964. Semantic Differential Technique in the Comparative Study of Cultures. *American Anthropologist,* 66(3), 171-200

PAWSON, R. and N. TILLEY, 1997. *An introduction to scientific realist evaluation.* Thousand Oaks: Sage

PEIRCE, C.S., 1931. *Collected Papers of Charles Sanders Peirce.* Cambridge: The Belknap Pr. of Harvard University Press

PETRILLI, S., 2015. Sign, Meaning, and Understanding in Victoria Welby and Charles S. Peirce. *Signs and Society,* 3(1), 71-102

POLONSKY, M.J. and D. SCOTT, 2005. *An empirical examination of the stakeholder strategy matrix. European Journal of Marketing,* 39(9/10), 1199-1215

PHELAN, C., 2015. Identifying Entrepreneurial Competencies Using Q Methodology: An Innovative Research Approach. *European Conference on Research Methodology for Business and Management Studies,* , 322-330

POTTER, J., 1996. *Representing Reality: Discourse, Rhetoric and Social Construction.* London: Sage

POYTHRESS, V.S., 1982. A framework for discourse analysis: The components of a discourse, from a tagmemic viewpoint. *Semiotica,* 38(3-4), 277-298

PRAHALAD, C.K. and G. HAMEL, 2009. The core competence of the corporation. *Change management,* May-June(1990), 203-220

PRICHARD, C., 2000. *Managing knowledge.* 1. publ. ed. Houndmills [u.a.]: Macmillan

PROBST, G.J.B., S. RAUB and KAI ROMHARDT, 1999. *Managing Knowledge: Building Blocks for Success.* First ed. Chichester: Wiley

PRUNEDDU, A., 2018. *QSortWare *2018]. Available from: https://application.qsortware.net/admin/

RASTOGI, A. *et al.,* 2013. Diverging viewpoints on tiger conservation: A Q-method study and survey of conservation professionals in India. *Biological Conservation,* 161, 182-192

REISE, S.P., N.G. WALLER and A.L. COMREY, 2000. Factor analysis and scale revision. *Psychological assessment,* 12, 287-297

REVELLE, W., 2018. *Procedures for Psychological, Psychometric, and Personality Research* [viewed 17 April 2019]. Available from: https://personality-project.org/r/psych/psych-manual.pdf

RHODES, C., 2001. *Writing Organization : (Re)presentation and Control in Narratives at Work.* Amsterdam/Philadelphia: John Benjamins Publishing Company

RHODES, C. and A.D. BROWN, 2005. Narrative, organizations and research. *International Journal of Management Reviews,* 7(3), 167-188

ROBBINS, S.P., 1989. *Managing Knowledge Critical Investigations of Work and Learning.* 4th ed. New Jersey: Prentice-Hall

ROBICHAUD, D., H. GIROUX and J.R. TAYLOR, 2004. The Metaconversation: The Recursive Property of Language As A Key To Organizing. *Academy of Management. The Academy of Management Review,* 29(4), 617-634

ROBINSON, F.Y., 2018. Jingle Fallacy Influences on Systems Acquisition: Communications Breakdown?

ROBINSON, K., 2001. *Out of our minds.* Chichester: Capstone Publ. Limited

RUQAIYA HASAN and M.A.K. HALLIDAY, 2014. *Cohesion in English.* Florence: Taylor and Francis

RUSSELL, B., 1979. *History of western philosophy.* 9. impr. ed. London: Allen & Unwin

SAMRA-FREDERICKS, D., 2005. Strategic Practice, 'Discourse' and the Everyday Interactional Constitution of 'Power Effects'. *Organization,* 12(6), 803-841

SANTOSUS, M. and SURMACZ, J., 2001. *The ABC's of Knowledge Management* Available from: http://www.cio.com/forums/knowledge/edit/kmabcscontent. html# benefits.

SAUNDERS, M.N.K., P. LEWIS and A. THORNHILL, 2015. *Research Methods for Business Students.* Seventh edition. ed. Harlow, United Kingdom: Pearson Education

SCHIFFEL, J.A., 2009. Using organizational semiotics and conceptual graphs in a two-step method for knowledge management process improvement measurement. *Internatonal Journal of Intelligent Information Technologies,* 5(2), 48-67

SCHOONENBOOM, J. and R.B. JOHNSON, 2017. How to Construct a Mixed Methods Research Design. *Kolner Zeitschrift fur Soziologie und Sozialpsychologie,* 69, 107-131

SCHRIESHEIM, C. *et al.,* 1993. Improving construct measurement in management research: Comments and a quantitative approach for assessing the theoretical content adequacy of paper-and-pencil survey-type instruments. *Journal of Management,* 19(2), 385-417

SEBEOK, T.A. *et al.,* 1987. *Classics of Semiotics.* Boston: Springer

SHAH, T., 2009. *In Arabian nights.* London [u.a.]: Bantam Books

SHEPARD, J.M. and J.G. HOUGLAND, 1978. Contingency Theory: "Complex Man" or "Complex Organization"? *The Academy of Management Review,* 3(3), 413-427

SHORT, T.L., 2007. *Peirce's Theory of Signs.* GB: Cambridge University Press

SILLINCE, J., P. JARZABKOWSKI and D. SHAW, 2012. Shaping Strategic Action Through the Rhetorical Construction and Exploitation of Ambiguity. *Organization Science,* 23, 630-650

SKOGLAND, M., 2017. A spatial approach to transformational change: Strategic alignment of the spatial and cultural environment. *Journal of Corporate Real Estate,* 19, 285-299

SIMON, H.A., 1991. Bounded Rationality and Organizational Learning. *Organization Science,* 2(1), 125-134

SITZ, L., 2008. Beyond semiotics and hermeneutics; Discourse analysis as a way to interpret consumers' discourses and experiences. *Qualitative Market Research,* 11(2), 177-191

SKOKAN, K., A. PAWLICZEK and R. PISZCZUR, 2013. Strategic Planning and Business Performance of Micro, Small and Medium-Sized Enterprises. *Journal of Competitiveness,* 5(4), 57-72

SLESS, D., 1981. *Learning and visual communication.* London: Croom Helm [u.a.]

SLOAN, J., 2017. *Learning to Think Strategically.* Third edition ed. London: Routledge

SMELSER, N. and R. SWEDBERG, 2005. *Principles of Economic Sociology.* 2nd ed. Princeton: Princeton University Press

SMITH, G.C.M., 2009. Social Networking and the Transfer of Knowledge. *Electronic Journal on Knowledge Management,* 9(1), 165-178

SMITH, G.C.M., 2013. Semiotics as Strategy. *Semiofest 2013.* Barcelona: Extracted from: https://www.semiofest.com/2013/graeme-smith-uk/, pp.None given

SMITH, G.C.M. and D. BLACKMAN, 2001. The Impact of Social Architecture on Knowledge Sharing and Organisational Learning. *Second European Conference on Knowlwdge Management.* pp.615-630

SMITH, M., 2010. Building institutional trust through e-government trustworthiness cues. *Information Technology & People,* 23(3), 222-246

SNOWDEN, D., 2006. Stories from the Frontier (emergent processes provide a means to disrupt entrained patterns. *Emergence: Complexity and Organisation,* 8(1), 85-88

SONENSHEIN, S., 2010. We're Changing—Or Are We? Untangling the Role Of Progressive, Regressive, And Stability Narratives During Strategic Change Implementation. *The Academy of Management Journal,* 53(3), 477-512

SOOD, A. and S. PULMAN-JONES, 2010. *Semiotics of Behaviour Change: Decoding the Community Narrative.* ESOMAR

STAMPER, R.K., 1973. *Information in business and administrative systems.* London: Batsford

STAMPER, R.K. *et al.,* 2001. Organisational semiotics: informatics without the computer? *Information, Organisation and Technology - Studies in Organisational Semiotics.* Kluwer Academic Publishers,

STAMPER, R.K. *et al.,* 1997. Signs plus Norms - one paradigm for organisational semiotics. *The International Workshop on Computational Semiotics.* Paris: pp.1-9

STAR, S.L. and J.R. GRIESEMER, 1989. Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science,* 19(3), 387-420

STASSER, G. and W. TITUS, 1987. Effects of Information Load and Percentage of Shared Information on the Dissemination of Unshared Information during Group Discussion. *Journal of Personality and Social Psychology,* 53(1), 81-93

STENNER, P. and R. STAINTON ROGERS, 2004. *Q Methodology and qualiquantology: the example of discriminating between emotions.* New York: Psychology Press

STEPHENSON, W., 1977. *Factors as Operant Subjectivity.* International Society for the Scientific Study of Subjectivity (ISSSS)Available from: https://search.datacite.org/works/10.15133/j.os.1977.001

STREINER, D. and G. NORMAN, 2008. *Health measurement scales.* 4. ed. ed. Oxford [u.a.]: Oxford Univ. Press

STURROCK, J., 2003. *Structuralism.* 2. ed. ed. Oxford: Blackwell

SWAAB, R.I. *et al.,* 2002. Multiparty Negotiation Support: The Role of Visualization's Influence on the Development of Shared Mental Models. *Journal of Management Information Systems,* 19(1), 129-150

SWAN, J. *et al.,* 1999. Knowledge management and innovation: Networks and networking. *Journal of Knowledge Management,* 3, 262-275

SWAP, W. *et al.,* 2001. Using Mentoring and Storytelling to Transfer Knowledge in the Workplace. *Journal of Management Information Systems,* 18(1), 95-114

TANNENWALD, N., 2005. Ideas and Explanation: Advancing the Theoretical Agenda. *Journal of Cold War Studies,* 7(2), 13-42

TARTER, J.C. and W.K. HOY, 1998. Toward a contingency theory of decision making. *Journal of Educational Administration,* 36(3), 212-228

TAYLOR, J.R., 1999. The Other Side of Rationality: "Socially Distributed Cognition". *Management Communication Quarterly,* 13(2), 317

TAYLOR, S., 2006. Narrative as construction and discursive resource. *Narrative Inquiry,* 16(1), 94-102

THEO VAN LEEUWEN, 2005. *Introducing Social Semiotics.* GB: Routledge Ltd

THOMAS, J., 1985. *Force field analysis: A new way to evaluate your strategy.* , pp.54-59Available from: http://www.sciencedirect.com/science/article/pii/0024630185900640

THOMAS, R., L. SARGENT and C. HARDY, 2010. Managing Organizational Change: Negotiating Meaning and Power-Resistance Relations. *Organisational Science,* 22, 22-41

VAARA, E., B. KLEYMANN and H. SERISTÖ, 2004. Strategies as Discursive Constructions: The Case of Airline Alliances. *Journal of Management Studies,* 41(1), 1-35

VAARA, E., V. SORSA and P. PÄLLI, 2010. On the force potential of strategy texts: a critical discourse analysis of a strategic plan and its power effects in a city organization. *Organization,* 17(6), 685-702

VAN DIJK, T., 1997. What Is Political Discourse Analysis? *Belgian Journal of Linguistics,* 11, 11-52

VAN DIJK, T., 2003. Critical Discourse Analysis. *The handbook of discourse analysis,* , 352-371

VAN DIJK, T., 2008. Discourse, knowledge, power and politics: towards critical epistemic discourse analysis. *CADAAD 2008,* (July), 10-12

VAN EXEL, J.C. and G. DE GRAAF, 2005. Q Methodology: A Sneak Preview. *Available from: www.jobvanexel.nl,*

VOGT, W.P., L.M. HAEFFELE and D.C. GARDNER, 2017. *When to use what research design.* Guilford

VOLOSINOV, V.N., 1973. *Marxism and the Philosophy of Language.* New York: Seminar Press

VON GHYCZY, T. *et al.,* 2001. *Clausewitz on Strategy.* 1. Aufl. ed. Hoboken: Wiley

VON KROGH, G., K. ICHIJŌ and I. NONAKA, 2000. *Enabling knowledge creation.* Oxford [u.a.]: Oxford Univ. Press

VON KROGH, G., I. NONAKA and L. RECHSTEINER, 2012. Leadership in organizational knowledge creation. *Journal of management studies,* 49(1), 240-277

VON KROGH, G., J. ROOS and K. SLOCUM, 1994. An Essay on Corporate Epistemology. *Strategic Management Journal,* 15(7), 53-71

WAISMANN, F., 1965. *The Principles of Linguistic Philosophy.* Macmillan, St. Martin's

WALLEY, P., 2013. Stakeholder management: the sociodynamic approach. *International Journal of Managing Projects in Business,* 6(3), 485-504

WATSON, G., 1971. Resistance to Change. *The American Behavioral Scientist (pre-1986),* 14(5), 745-767

WATTS, B., 1996. *Clausewitzian friction and future war.* Washington, DC: Institute for National Strategic Studies, National Defense University

WATTS, B.D., 1996. *Clausewitzian Friction and Future War.* National Defense UniversityAvailable from: http://gateway.proquest.com/openurl?url_ver=Z39.88-2004&res_dat=xri:policyfile&rft_dat=xri:policyfile:article:00008303

WATTS, S. and P. STENNER, 2012. *Doing Q Methodological Research: Theory, Method, Interpretation.* 1. publ. ed. Los Angeles [u.a.]: Sage

WATTS, S. and P. STENNER, 2005. Doing Q Methodology: theory, method and interpretation. *Qualitative Research in Psychology,* 2(1), 67-91

WEICK, K.E. and K.M. SUTCLIFFE, 2007. *Managing the Unexpected: Resilient Performance in an Age of Uncertainty, Second Edition.* Second ed. San Francisco: Jossey-Bass

WEISINGER, H. and R.L.L. CALI, 1999. *Emotional intelligence at work: The untapped edge for success.* San Francisco, CA: Wiley Periodicals, Inc., A Wiley Company, pp.39-42Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/pfi.4140380611

WENDT, A., 1999. *Social Theory of International Politics.* Cambridge: Cambridge University Press

WEST, D. and M. ANDERSON, 2016. *Consensus on Peirce's Concept of Habit Before and Beyond Consciousness.* Cham, Switzerland: Springer

WHETTEN, D.A., 1989. What Constitutes a Theoretical Contribution? *The Academy of Management Review,* 14(4), 490-495

WILDEN, A., 1987. *The rules are no game: the strategy of communication.* England:

WILLIAMS, R., 2006. Narratives of knowledge and intelligence ... beyond the tacit and explicit. *Journal of Knowledge Management,* 10(4), 81-99

WILLIAMS, R., 2008. The epistemology of knowledge and the knowledge process cycle: beyond the ‘‘objectivist’’ vs ‘‘interpretivist’’. *Journal of Knowledge Management,* 12(4), 72-85

WINT, F.E., 2013. *'Am I bothered?' - Using Q Methodology to explore what bothers young people on Facebook*, School of Education (Sheffield)

WITTGENSTEIN, L., 1983. *Philosophical investigations.* Oxford: Blackwell

WITTGENSTEIN, L., D. PEARS and B. RUSSELL, 2008. *Tractatus logico-philosophicus.* 1. publ. in Routledge Classics, repr. ed. London: Routledge

WRIGHT, G. and CAIRNS, G., 2011. *Scenario thinking: Practical approaches to the future.* Available from: http://www.palgraveconnect.com/doifinder/10.1057/9780230306899

ZABALA, A., C. SANDBROOK and N. MUKHERJEE, 2018. When and how to use Q Methodology to understand perspectives in conservation research. *Conservation Biology,* 32(5), 1185-1194

ZEMKE, R. and S. ZEMKE, 1995. Adult learning: what do we know for sure? *Training,* , 31-40

ZHENG, W., B. YANG and G.N. MCLEAN, 2010. Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research,* 63(7), 763-771

Appendices

Annex 1: Case Studies

Case Study 1: CRM Project

Context of the CRM Project

This case study reviews the implementation of a customer relationship management (CRM) system as part of a knowledge management initiative. During the implementation process it became apparent that the development was not going as well as expected. Research determined that the organisational learning required to affect behavioural change in the way people work was not occurring, as a result of too little attention being given to existing social frameworks within the organisation. This case study reviewed the role of social architecture in the sharing of knowledge within organisations. The project at that time was exploring the role of social architecture in enabling organisational learning and the transfer of knowledge in organisations. The premise was that the role of networks, physical building design and work systems have a far greater impact upon the potential to share knowledge successfully than any IT based knowledge management system currently has.

Diagnosing Project Issues Using Knowledge Management Theory

At the time knowledge management was seen as an increasingly important part of organisational strategy (Brint 2001; Malhotra 1998; Nasseri) and its potential benefits have been widely discussed, see for example Santosus and Surmacz (2001), Prichard (2000) and von Krogh, Ichijō and Nonaka (2000). This led to senior managers in the UK public and private sectors striving to implement knowledge management strategies in their respective organisations. Many of these initiatives resulted in failure, and very expensive ones at that. The contention at the time was that this was because management thought that the answer to the problems lay with the installation of an information technology solution. The UK Government's drive for greater synergy and efficiency across departments at that time, (evident in the "joined up Government" and "Modernising Government" initiatives), was seen as a key driver to demonstrate the true value of Ordnance Survey information as a common referencing tool for all areas of UK

Government. These "E-Government" initiatives impacted on Ordnance Survey's drive to satisfy a wide variety of needs through an increasingly sophisticated supply chain. Not least of them was a discerning, and demanding customer base with growing sophisticated e-business needs. Some key customers were looking for greater interaction in their customer/supplier relationship with the organisation. They were becoming extremely resistant to trade with Ordnance Survey on a purely transactional basis and were beginning to demand the same level of service that they receive from other suppliers, as well as that which they themselves may provide, as a direct result of a growing economy driven by developing web service capability. Ordnance Survey defined the problem at the time as a knowledge management problem where they looked to implement a solution to understand their own customer base. This led to a multimillion-pound initiative that would deliver an information technology solution that would capture information at key customer contact points across a complex customer interface. Thus, a CRM strategy and implementation programme were put in place to build up Ordnance Survey's customer management capabilities. This would have absorbed sales, service and marketing processes, developing them within an overall customer management framework.

As the project developed it become apparent that there were problems impacting on the implementation. The level of staff awareness was not as high as had been anticipated, the social network was resisting likely change brought about by the project and inertia was building in the adoption of change to people managed processes. There followed a growing interest by senior management to explain why this should be and a study started to look at what was expected to occur by developing and installing the new system. As it began to explore the implementation processes the organisation realised that there were three key assumptions being made. It should be noted that these assumptions in application were more prevalent and wider than just Ordnance Survey itself, they seemed to reflect assumptions within the literature of both systems theory and knowledge management.

Assumptions on Project Discourse

The first assumption was that system implementation changes processes and therefore changes behaviour. As was outlined earlier the reason for implementing the new CRM system was to provide a basis for knowledge that would enable individuals within the organisation to behave in a different way. This desire for different behaviours was key because implicit within this was a need for learning to take place (Levine 2001). A commonly cited definition of learning is a 'relatively permanent change in behaviour', see for example (Robbins 1989, p, 62) and this implied that learning takes place before there can be a change in behaviour. Therefore, if the new systems and processes are not developing new behaviour, then the inference is that the new knowledge management systems are not enabling the learning needed in order to trigger the desired new behaviours. From discussions within Ordnance Survey it became apparent that it was thought that, by changing the work processes within the organisation in order to facilitate a sharing of knowledge, then new behaviours would emerge as a direct result. Thus, the new knowledge that was accessible to all would encourage learning and new behaviour. That this was a reasonable belief can be seen when considering this statement from Argyris and Schon:

> "Generically an organisation may be said to learn when it acquires information (knowledge, understanding, know-how, techniques or practices) of any kind by whatever means. In this overarching sense, all organisations learn, for good or ill, whenever they add to their store of information, and there is no stricture on how the addition may occur" Argyris and Schön 1996.

There is a suggestion here that merely enabling the provision of more information is in itself learning. Moreover, Blackman (2001) has indicated that there is confusion between information and knowledge in general terms within organisations, and this too may be leading to a greater focus on the provision of new information, rather than upon the processes that develop new knowledge and behaviours. However, learning, be it organisational or individual learning is not dependent solely upon wider access to new knowledge. Argyris and Schön (1996) are very clear that organisational learning will result in something that is different – having more information alone is not learning, and nor will it engender learning. Therefore, merely having a knowledge management system, and providing access to it, would not produce changes of behaviour or lead

to greater understanding. In order to learn, there needed to be a motivation to learn, see for example (Gagne 2001), and there was a suggestion at the time that this may be where the problem was occurring. The individuals within the system may have access to the new information but in order for them to use it, to develop new ideas, they needed to see why or how it would be of use to them. This awareness would lead to a predisposition to both learn and develop the new information potential. There was another important point here, which is, that the then behaviour of employees should act as an indication of the level of learning. If behaviour does not change then there has been no learning. This was a very clear level of feedback that needed to be considered more carefully.

The second assumption was the widely held view at the time that systems are mechanistic in nature. Morgan (1986) indicates that there are many ways of looking at organisational realities. One way is the utilisation of metaphors. In this case, in discussions with employees (especially managers) within Ordnance Survey there was a mechanistic view of the organisation as a machine, with the employees as cogs working within it. The then focus upon business process re-engineering and the way it was described supported this view of the organisation as a machine that can be rebuilt, fixed and have new parts fitted. Such a metaphor then meant that it may be assumed that changing the machine mechanics (i.e. organisational systems and processes) will naturally change the outputs in some way.

The third assumption was that organisational systems were viewed as rational and follow a logical cause and effect relationships between the inputs and the outputs of the systems and processes. And for this to occur there needed to be a rational approach to knowledge generation; by this meaning, there are a set of definite truths, which can be accessed by all (Russell 1979). Rationalists state that a core set of knowledge can be deducted by reasoning in a logical way. Within knowledge management development this would indicate a set of systems and processes that could be determined to be the right way to manage the organisation in order to gain the desired outputs; the search for the appropriate input will lead to the right output. There was, however, an accepted view that much knowledge within organisations is constructed by the

individuals working within it (Easterby-Smith 1999; Evans and Easterby-Smith 2000; Easterby-Smith 1997); and (Blackman 2001). Logically therefore if there was to be the requisite organisational learning required to develop new behaviours there must also be a recognition of the constructed nature of knowledge within the new system development. This is reflected within knowledge management literature. McAdam and McCreedy (1999) indicated that many knowledge management models reflect the old managerial paradigm as outlined by Clegg and Palmer (1996), which does not recognise the importance of the individual within the system. McAdam and McCreedy (1999) go on to show that to ignore the constructed and social nature of knowledge development is to oversimplify the behaviour modelling and therefore to underestimate what needs to be done to develop knowledge management systems.

> "knowledge is by nature emergent in terms of its interpretative, process-oriented and relational properties. And knowledge in organisational contexts is generated through complex, dynamic interactions between actors, organisations and social environments" Kakihara and Sorenson 2001 p, 16)

Meanwhile Cook and Brown (1999), talk of a 'generative dance' where new ideas are interpreted via several input sources within the organisational context thus bringing forth-new meaning and new knowledge. This demonstrates an iterative process where new knowledge develops from reactions with current knowledge and new ideas. They also reflect common views that within the system individuals hold tacit knowledge. These elements of knowledge creation infer that there is a level of knowledge within an individual that can be developed and interacted with, in order to develop something new again. Unless the individual engages with the process, what they already know cannot be either ascertained or accessed and thus it will be outside the system. It is apparent that the level of current understanding is acting as the basis for future.

Three assumptions begin to explain why Ordnance Survey was having problems implementing CRM. The choice was made at this point to look at Knowledge Management as if it was a communication system, to see if using this metaphor helped to explain why learning was not occurring as expected. The choice of a communication metaphor was made due to the increasing focus upon the need for incremental understanding within the system. This is a key element of

any communications model see Robbins (1989) for example and it was hoped that this differing perspective would help diagnose the problem more clearly.

From the first assumption, it was clear that many messages were being sent but that not enough consideration was being given to the feedback within the system. Because the system was seen to be the driver the output was being assumed and not enough thought was given into ensuring any inter-mediation had occurred. From the second assumption it was again apparent that the individuals within the system were not being considered enough. If one were communicating at this point, how the message would reach the receiver would have to be considered. This debate was not occurring as far as knowledge management was concerned. The last assumption meant that messages were almost certainly being encoded wrongly.

Review of Project Assumptions from a Knowledge Transfer (Discourse) Perspective

Within Ordnance Survey there was a great deal of input as regards systems and new ideas but not enough ownership and interest from those it should have been affecting. Simon (1991) argues that unless the bounded rationality of both individuals and organisations is developed in order for the new knowledge to be recognised and accepted then the new knowledge may be present within the system as a whole but it will fail to make an impact. The argument is that too much learning is based on cognitive learning theory, where an abstract explanation (as in sending round a memo or setting up a procedure manual) is used. Individuals are expected to find out for themselves but, if they have no interest, this is unlikely to work, and no learning will occur. Elkjaer (2000) advocates a change in focus on organisational learning to concentrate more upon active learning techniques. Such an approach is being encouraged within the education system, as it encourages engagement in the process (Zemke and Zemke 1995), and it seems logical that similar ideas can be utilised to encourage organisational learning. It was the contention at the time that for this to be done effectively, the social architecture of the host organisation needed to be evaluated and understood.

Originally the term ‘social architecture’ was coined as a form of architecture intended for use by the mass of people as social beings and was a reaction against architecture concerned with form

and style supposedly for the dominant members of society (English Heritage 2001). Morden (1997) uses the term when determining the elements of leadership. He outlines Kay (1993) definition of architecture as being the network of relational contacts within and around the enterprise. The relationships will affect both trust and communication. It is the idea of social architecture affecting interpersonal relationships, structures, leadership, communication and therefore the successful passing on (or not) of messages that is of interest. Knowledge management is fundamentally about transferring information in such a way that the user can both understand and use the meaning of the transfer in some way. Knowledge management is essentially a communication system and logically must be affected by the social architecture of the organisation where messages are either being lost, or they are being reshaped during the process so that the understanding being transferred is incomplete. Communication can be seen as an energising force within the organisation enabling things to change. If some of this meaning is lost the desired end result will change. (Clausewitz 1832) would have recognised this loss within the system as being caused by friction within the organisation and the knowledge transfer systems. He further argued that friction as a concept distinguishes real war from planned war on paper. As an example, he describes the chain of command in a battalion. Whilst the battalion may be trained and disciplined into one cohesive unit it is at the same time made up of individuals, ‘‘each of whom still has his own friction at every turn’’. And the least significant of whom may bring things to halt or cause things to go awry. Clausewitz argues that strategies and plans are very simple constructs on paper. But the simplest of tasks as a component of these strategies and plans can be difficult to perform. The cumulative effects of these difficulties will impact on the ability to stay on course towards, and achieve, the overall objectives of those strategies and plans. This notion of friction helps actors to understand some of the key dynamics within a social architecture construct. Understanding the social architecture in a particular given situation may also help actors to understand the source of this friction, through the fog of uncertainty created by this very same friction.

Impediments to Knowledge Transfer

All communications models show filtering and 'background noise' as key elements in the success (or not) of message and interpretation. By rethinking learning as being framed by the social architecture, it can be seen that social architecture may act as a filtering system. For example, emotions at work have always been acknowledged to have an impact but, increasingly, it is seen that they will seriously affect the effectiveness of the outputs of any system (Clutterbuck and Megginson 1999; Weisinger and Cali 1999). They will always affect the potential receiver and will change over time. This was the case at Ordnance Survey, where lack of attention to the architecture was contributing to the problem, as there had been a re-organisation and a new management regime in place for six months.

Within the e-business strategy there were many new developing initiatives that initially did not coexist with the CRM project. No re-evaluation of the CRM strategy, in line with the new e-business strategy, took place until there were obvious problems and it became apparent that there were contradictions between the e-business project and the CRM project. It soon emerged, that although the output from both projects desired was the same, the inputs to the system were different in that there were many more filters to learning – people were concerned about their futures, felt demotivated and could not see the relevance and therefore were beginning to ignore the CRM initiative. Without looking at what the new encoding needs should be, there was no potential understanding and no learning. This suggests that there was a growing friction between narratives in the two projects that were increasingly being seen as contradictory.

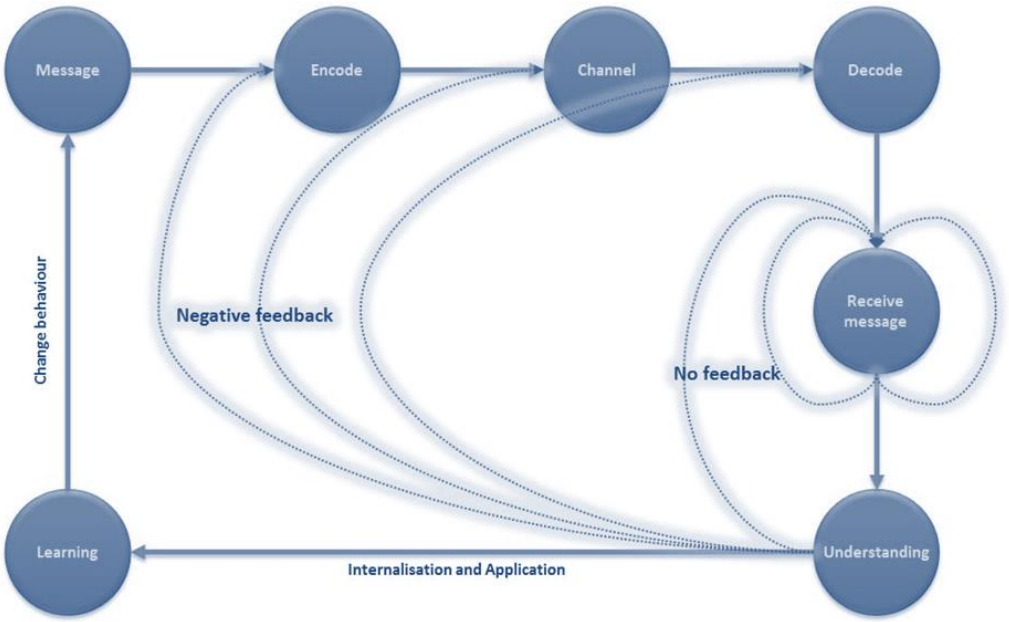


Figure 74: Learning Model Reflecting the Role of Social Architecture (Smith and Blackman , 2001)

This new metaphor for knowledge management as a learning model reflecting the role of social architecture, can be used for managers so that they no longer think of the organisation as a machine. Marshak (2002) indicates that changing the root metaphor can enable a broader understanding of the social systems within the organisation and can, therefore, help to promote change. By using a changed metaphor of learning as a communication system, and by thinking of the organisation as a network of "social architecture" managers may rethink the way they set up implementation systems. They will, hopefully, be more output driven and be more aware that the 'cogs' are the enablers and, maybe more importantly, dis-enablers.

Smith and Blackman (2001) went on to show that many Knowledge Management problems are about the way that knowledge development processes are being developed in isolation from the social systems of the organisation. Rather than being a process problem, poor knowledge emergence from a new system is more likely to be a communication and learning problem, because there is a failure to engage with the individuals who are within the system.

On a semiotic note it could be argued that what was actually happening in this project was a lack of attention to syntax relating to symbols that project stakeholders could not read nor understand their relevance. This left the stakeholder conversation, regarding the CRM project, in an implicit rather than explicit state, consequently key stakeholders, in senior management positions,

assumed a position that was non-partial or lacked unanimity. It was those 'taking a position' who created symbols of their own, 'negative feedback' and 'no feedback' in **Error! Reference source not found.** above, whose narrative became more believable, in the project conversation, than that being developed by the project that led directly to project failure. Because the failed project created cynicism and doubting towards CRM and it took another eight years before the organisation felt confident enough to implement the original CRM strategy.

Case Study 2: Business Process Re-engineering

This case study builds on the outcomes of the previous case study. At the close of the CRM project in the previous case-study it was acknowledged that the focus was on seeking technical solutions without engaging the very people who would be managing the processes the solution sought to improve. This led to a feeling of alienation, which distanced the actors from the strategy discourse and began to undermine the objectives of the project. A realisation that came too late and proved terminal to the project. So, the CRM project was terminated, but it did not solve the systemic problems that existed in the processes within the customer interface. Management realised that instead of seeking to solve the problems with IT solutions, people solutions had to be agreed before they could be implemented. This perspective took account of the very real anxieties that existed in the narrative towards the failure of the CRM project. For the purpose of this new project, it was also agreed that a comprehensive review of processes in the customer interface be defined in terms that those working within it would recognise, in other words, those impacted by likely change to processes in the customer interface would themselves define the artefacts that required changing. The term Sales Pipeline was adopted by the project team as a metaphor for the customer interface across the organisation. Analysis of the sales pipeline encompassed the tracking of all transactions from the identification of prospective customers; quote to order conversion; fulfilment; and post-sales support. As an intense human activity this type of supply chain is wholly dependent on knowledge and requires social network activity to transfer knowledge to the point of need in order to fulfil customer needs. This discussion builds upon work undertaken in the previous case study on the CRM project, which

developed an organisational model of the social interactions affecting knowledge transfer within organisations (Blackman, Smith and Good 2003) in terms of the locus of knowledge; the ability and willingness to share knowledge; the prevention of knowledge attrition and therefore knowledge retention throughout the customer interface.

The argument was made that whilst much information was being shared, the knowledge that makes such information useful must also be transferred or new desired outcomes will not emerge. In order to share such knowledge, lessons were learned from three major process mapping exercises that were carried out between 2004 and 2007. The purpose of these exercises was to determine the extent of process failure within the sales pipeline. Essentially these projects set out to discover how knowledge was self-managed by the staff themselves from a social network perspective.

What was the problem?

Management knew for some time that account managers and order processing staff were being distracted from the real focus of their roles and responsibilities, towards dealing with growing customer demand that was the result of process non-conformance within the customer supply chain. At the same time there were a number of widely held assumptions regarding the nature of non- conformance and what was needed to reduce it. However, management were persuaded that a new way of thinking was needed to address the complexity of the problem. This new approach would consider the application of systemic thinking for human systems and processes; the methods of creating, organising, and using information; and the transfer and application of knowledge. Internalising this system view and the consequential impact on social networks should, it was felt, lead to practical and effective systemic action and process improvement.

There was growing anecdotal evidence that each iteration of management restructuring was driving knowledge into silos throughout the sales pipeline. There was evidence that individual "experts" were acting as knowledge hubs and exerting undue influence on the efficacy of the supply chain. It was felt at the time that enterprise wide technical and management systems were needed for the efficient sharing and dissemination of information. However, creating these

processes was not in itself enough to set the process in motion, since there were a number of individual and community barriers to sharing information. These barriers seemed to coincide with functional or hierarchical barriers that could lead to the splintering of organisational information; its acquisition and dissemination; and management structures were getting in the way to facilitate the collection and dissemination of information. Management and organisational culture have a large part to play in eliminating these barriers, the difficulty in reversing this process could not be underestimated (Probst, Raub and Kai Romhardt 1999).

Similar to the previous case study, analogous thinking was extant in the management chain in relation to widely held beliefs and assumptions regarding the nature of knowledge management as a tool for behavioural change. Again, the first assumption was that system implementation changes processes and behaviour. From discussions within sales and marketing it was clear that senior management felt, that by changing the work processes within the organisation, as part of an IT solution, then new behaviours would emerge as a direct result. Thus, the new knowledge that was accessible to all would encourage learning and new behaviour. Again, the second assumption was that systems are mechanistic in nature. In discussions with employees (especially managers), there was a mechanistic view of the organisation as a machine, with the employees as cogs working within it. The focus upon business process re- engineering and the way it was described supported this view of the organisation as a machine that can be rebuilt, fixed and have new parts fitted.

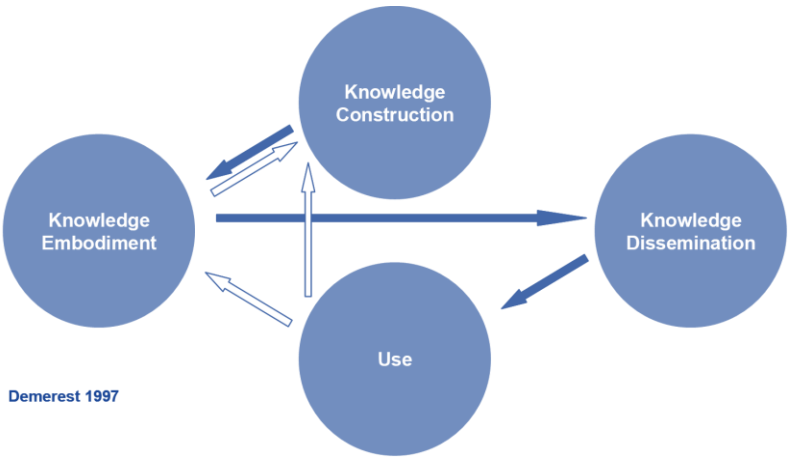


Figure 75: Demerest's Knowledge Management Model

However, McAdam and McCreedy (1999) indicated that many knowledge management models reflect this old managerial paradigm and do not recognise the importance of the individual within the system (see Figure 1 above, solid blue arrows are expected behaviour, and white arrows represent actual behaviour). And thirdly, the assumption that organisational systems are rational. Management knew that there were key processes within the system that were increasingly reliant on "experts" in the back office (staff who are remote from the customer have nonetheless valuable knowledge considered important in helping to managing customers) , and that these 'experts' were being used by sales managers to help them resolve customer issues. This flow from the front office (salespeople in constant contact with their customer) to back office was beginning to impact on the workload of these experts and their immediate workplace colleagues. This raised a number of concerns for senior managers such as; where was this demand coming from; the root cause; and what knowledge in the back office was being valued and exploited by the front office. This appears to exemplify previous findings McAdam and McCreedy (1999), which argue that to ignore the social nature of knowledge development is to oversimplify the behaviour and to underestimate what needs to be done to develop knowledge management systems. Figure 2 below shows this increased level of complexity.

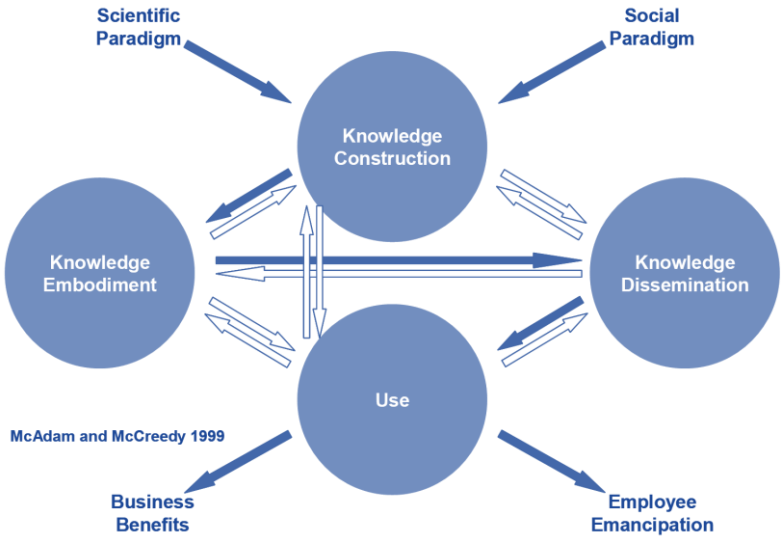


Figure 76: McAdam and McCreedy's Knowledge Management Model

It was logical, therefore, that if there is to be the requisite organisational learning, required to develop new behaviours, there must be recognition of the constructed nature of knowledge

within the new system. There was a growing realisation within management that in order to affect the narrative and achieve the required change in the process then those who worked on the process needed to understand the process artefacts in order to be able to articulate necessary change for themselves. To determine this system view of the customer interface, management set up a Service Improvement Team (SIT) who specialised on systems thinking and process reengineering.

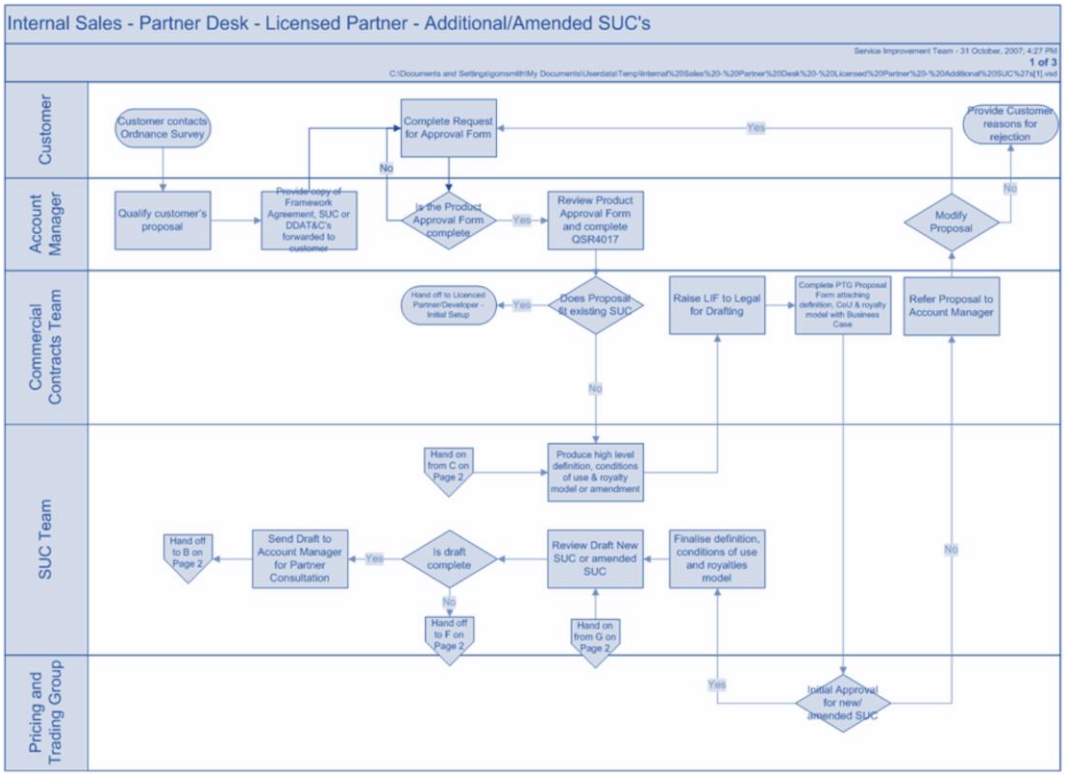


Figure 77: Process Map showing knowledge transfer between teams and individuals

The SIT facilitated a series of workshops over a three-month period; with staff; to codify processes (see **Error! Reference source not found.** above), business rules and local work instructions. The S IT provided a resource and structure to prioritise work and feedback outputs from the workshops through to the SIT; management; and IT systems architects. This new end to end view helped staff to understand better the activities they were responsible for and the part they played in adding customer value. The sales pipeline was then defined as seven key stages, to enhance this understanding, that would help to define process problems. This definition was a useful artefact that made a considerable contribution to the changing strategy narrative, in that it began to

illuminate the nature and the extent of the sales pipeline for others to evaluate their contribution to the end-to-end process.

Demand Generation	Service	Support
Identification → Qualification → Proposal → Acceptance → Fulfilment → Invoice → Post sales		
Demand generation through planned and sustained market segmentation, research and communication; leading to product and service development to meet changing market needs. Defined within the scope of the overall Corporate Strategy. Pre-sales activity forecasting and researching specific requirements for markets and customers identified as potential targets from our demand generation processes.	Specific product and licensing quotes defined by current business rules; pricing model; and contractual T&C's. Signed T&C's and valid orders for processing. Order processing and packaging, bill to; and ship to customer details; and courier details. Complete invoice details of licence; product details; customer holdings; and bill to details.	Provision of technical support to help customers develop added value from our products and services. Identifying sales leads and opportunities and passing them back into the sales pipeline.

Table 24: The Sales Pipeline

Having defined the sales pipeline, the next objective was to audit volume within the processes. The scope of these audits was the whole of sales and marketing and included teams in the 'back office' who managed key stages in the end to end process for sales and marketing. There were three major audits, 2004, 2006 and 2007 covering some 250 staff. Staff were asked to record time for a calendar month against a list of activities within the sales pipeline. Resource was measured in terms of hours spent on each activity and converted to salary cost; expenses and then annualised to provide the total annual costs.

Problem Diagnosis

2004 Audit

Staff were then asked to participate in workshops to verify the data results and challenge the assumptions made. Initial workshops were process based including staff from various teams across the sales pipeline. A second series of workshops were conducted on a team by team basis to try and capture the root cause of non-conformance from the process perspective and the team perspective. This allowed participants to engage in the construct of new artefacts. This resulted in a more balanced view of the root cause of failure and each workshop acted as a "sanity check" on the quantitative and qualitative data collected so far. The data analysis and workshop output were then presented to the Senior Management Board to gain agreement on the findings, conclusions, recommendations; and the action plan required to prioritise and address process

non- conformance in the sales pipeline. This audit presented several challenges to the SIT as the scale and complexity of non-conformance, that nobody had hitherto been able to present, was a comprehensive picture of systemic failure in the system. The need to gain consensus and agreement on the data findings and agree a programme to prioritise work to improve the customer experience in the sales pipeline received a new urgency. To address these challenges the data was rigorously analysed, and the findings aligned to the sales pipeline framework to create a new narrative. This view made it easier to communicate the findings back to participants, in a process view that they could easily recognise and understand. This new landscape of artefacts was designed deliberately to try and establish key positions that participants would coalesce around in order to facilitate desired change by those participating in the process; and at the same time justify the need for change within the senior management team to realise resources and capacity to fund change projects.

The results confirmed managements' view that sales managers were spending too much time on non-selling activity rather than stimulating sales and new business. This new construct brought into sharp relief a hitherto hidden phenomenon that quantified the nature and the root cause of non-conformance in the system. The audit identified £1.05 million of process non- conformance, which equated to 21% of the total salary for sales and marketing activity. As a result, a programme of process and service improvement was recommended and accepted. The consensus view was that a lot of the issues raised by the audit were widely known; what had not been appreciated was the nature and extent to which these issues had an impact all the way up and down the sales pipeline, and the attendant cost. It was this new perspective that galvanised management and staff alike to justify the need for change.

One of the more surprising results was the high levels of non-conformance that some members of staff were having to deal with; some were dealing with levels of non-conformance that were as high as 80% of their total effort employed. Closer inspection of the data and workplace analysis of activities measured, revealed the nature and extent of the role these individuals were playing within the social network. The most revealing aspect of their role was the fact that the rest of the

organisation was using them as knowledge experts. They were being exploited for their knowledge; the position they held in the organisation; their propensity to help others solve customer problems; and, to a certain extent, by their own management who left them alone simply because they "got things done" and helped the team achieve key objectives. As a result of staff movements and retirements these individuals were having to deal with increased demand and conversely were becoming a scarce resource and a growing risk to the business. Their own lack of capacity to create and innovate change in the process, due to volume pressures was reducing their ability to transfer knowledge to others. Of immediate concern to management was the high degree of risk that this built into the process. Knowledge experts leaving their role would initiate a collapse of the social network previously dependent upon their knowledge. Upon reflection, this was a key aspect of the strategy narrative in its own right that required urgent attention.

To address the known risk of knowledge hubs, that these knowledge experts represented, the SIT identified the key players and a series of workshops were conducted to establish the scope of expertise that these individuals had in order to define exactly the range of skills and competencies employed. At the same time social network analysis was used to map the knowledge transfer pathways from each knowledge hub; their area of influence across the business; as well as the input to and output from each knowledge hub (knowledge flow and volume). The human system was dealt with as a matter of priority in order to substantially reduce this risk. The business analysts completely re- mapped the processes around the knowledge hubs and identified the knowledge requirement at activity level as they went along. The process mapping was used to codify tacit knowledge for future transfer; and redefine roles and responsibilities. This helped to resolve issues where there was an almost complete absence of any clearly defined end to end process. The most that existed within some processes were local work instructions at team and an individual level. The lack of clearly defined process maps showing process handoffs between teams and individuals had a huge impact on the amount of resource that was not aligned to the sales pipeline. This lack of definition was a major source of discussion at subsequent workshops.

This absence of process maps led to job creep, as individual responsibilities were allowed to grow at the expense of neighbouring roles and responsibilities. In some instances, this led to job overlaps. This overlap caused severe problems through staff movements and managers recruited to backfill these vacancies. In many instances job descriptions bore no relationship to the scope of the role the previous incumbent actually fulfilled. Additionally, subsequent recruitment created gaps in the process handoff that took some time to fill through unplanned training and job role reconciliation with neighbouring staff in the process.

Prior to the audit there were a number of stalled IT improvements and requests for IT change (RFC), that had been scheduled to resolve quote to order problems and invoice accuracy. These IT improvements attempted to automate the business rules that are complex and not easily replicated in IT systems. The demand audit identified process and knowledge gaps where changing business rules had not been replicated through RFCs as they were waiting for IT system architect resource. This meant staff having to create manual workarounds without necessarily codifying what these were. Additionally, RFCs had no cost metrics to help prioritise the work required to implement these changes. Process non-conformance costs from the demand audit were aligned to the RFC schedule to prioritise this work and implement it.

2006 Audit

As a consequence of the work done after the 2004 audit it was decided to benchmark improvements with a second audit in 2006. This audit was structured along the same lines as the previous audit with some improvements to clarify activity and to align results from both audits. The 2006 audit showed that failure demand had fallen from 21% of total cost to 14% in 2006. This was the equivalent of stripping out £0.4 million worth of process non-conformance on an annual basis. The 2006 audit highlighted some significant movements in the demand profile. Further detailed analysis of the data at a team and individual level told management the direction and total value of this movement. Some of this movement was partly due to the elimination of non-conformance in the sales pipeline. It was this reduction that allowed senior management to realign resource towards demand generation in the pre-sales part of the pipeline. The cost of

non-conformance fell by £0.4 million over an 18-month period between the two audits; the most significant reductions were in the proposal stage of the pipeline. These savings were largely due to facilitating the transfer of knowledge through the knowledge and learning programme.

Figure 78: Total non-conformance 2004 – 2006

2007 Audit

Over the three audits, non-conformance in 2006 fell by 35% against the benchmark of 2004; and fell again by 34% in 2007 against the previous audit in 2006. The effort in fulfilment dropped as a result of continuing introduction of automation in order processing. This had the effect of reducing overall cost to serve on sales support activity as support effort moved from high value resource (sales managers) in terms of cost, to low level resource cost in administration as sales staff started to increase activity in demand generation and post-sales support parts of the pipeline.

Conclusion

It was consideration of the concept of social architecture affecting interpersonal relationships, structures, leadership, communication and, therefore, the successful passing on (or not) of knowledge that led to the formation of this project. The work of the SIT established that the real challenge to the narrative was one of communication.

The degree with which staff, are prepared to transfer knowledge depends on the position they take towards the developing sales pipeline strategy. Their adopted position depended upon their interpretation governed by current stimuli and /or past experience. The SIT did find evidence of the rate and quality of knowledge transfer being conditioned by the position held by staff working in the sales pipeline and the environment that prevailed leading up to and between the first two audits. Between the first two demand audits of 2004 and 2006, the organisation conducted a staff opinion survey on a wide range of issues. Detailed workshops with a focus group on the finding of this study suggested staff were unwilling to participate in process creativity and innovation to improve the sales pipeline. The main issues were management and leadership; lack of trust due to "a blame culture"; and the lack of defined boundaries between roles and responsibilities. Once these issues were seen by staff as being addressed, there was a noticeable improvement in the rate of creativity and innovation. Basically, staff appeared to be simply "keeping their heads down" until such times as a more enlightened management was in place and they trusted the new regime. As the SIT began to close off remedial actions identified through demand audits levels of non-conformance began to fall as creativity and innovation began to rise, signalling a new engagement in the sales pipeline project discourse and narrative.

During the workshops between the first two audits it was an often-expressed perception that staff did not have the time to change the way they do things. Some processes mapped were running to near capacity in relation to the number of people employed on them. There was a lack of thinking space that negated staff's ability to be creative, and initiate change, through successive approximations of the desired end result. It was soon realised that the SIT was fulfilling this requirement. Robinson (2001) argues that creativity involves a shift in the focus of attention and mode of thinking as actors attend to what is working and not working. It can be individual or shared, involve instant judgement or long-term testing. In most cases there are many shifts between these two modes of thought. The sales pipeline project found that staff don't have enough time to learn when processes are running to or just above capacity. An exclusive focus on efficiency can discourage learning; managers who overemphasise results can

subtly discourage technologies, skills or practices that make new approaches viable (Edmondson 2008). In a customer service environment staff have to have space to encourage the sharing of analysing insights, questions and problems.

Intentional networks according to Nardi, Whittaker and Schwarz. (2000) have at their centre a knowledge hub actor who is a gatekeeper to the creation and transfer of knowledge. The focus of process demand on these players is predicated on their ability to expedite the creation, acquisition and transfer of knowledge required. This can create positions of power within the network where the player may exercise a dominion over others in the network according to social conditions and personal character traits exerted at the time of exchange. Intentional networks are "egocentric" networks that arise from individuals and their communication and workplace activity. These networks are personal; in contrast to communities of practice where workers inhabit a shared cultural space, intentional networks are the creation of individuals. Joint activity is accomplished by the assembling of sets of individuals derived from overlapping constellations of personal networks. Nardi, Whittaker and Schwarz (2000) further argue that these individuals have to create sufficient shared understanding to get work done, but such understanding must be collectively constructed rather than existing historically in an ongoing community or organisation. An intentional network is often much more distributed than a community of practice. Workers are not thrown together in situation- dependent ways or assembled through outside forces. Instead, work activities are accomplished through the deliberate activation of workers' personal networks.

This case study perhaps suggests that strategy implementation problems are about the way intentional processes and systems for desired knowledge creation are developed in isolation from some social systems of the organisation. Rather than being a process problem, poor knowledge emergence from a new system is more likely to be a communication and learning problem where there is a failure to engage the project strategy in expected ways, which may point to the nature of the developing conversation and argumentation that exists to formulate strategy. At present many of these issues do not seem to be taken as seriously as they need to be within the

organisations. Organisations do not spend enough time diagnosing the root cause of this strategy disconnect to transfer knowledge within the process. Social networks exist for a reason, either to make an existing process work or, alternatively, to by-pass the codified process due to failure in people who may be wedded to the security of known relationships and won't change. Merely codifying the strategy in some form of narrative may be considered vital but may not be enough to anticipating entropy as the interpretation of this newfound narrative may drift away to an interpretation that was unintended. In many businesses it is this gap that increases in size due to management nascence, by which time it is too late. It would appear that the outcome of failure in strategy has some spatial distance from the root cause of that failure. The case study suggests that this unconscious focus on outputs rather than inputs may be a major contributor to system failure. By spending more time on diagnosis of knowledge as storytelling and narrative; how it is created; and ultimately transferred (or not as the case may be) that will help to avoid the pain outlined in this case study. Management of the artefacts and therefore the narrative improved the relationship with key actors and stakeholders seeking to implement some quite painful change to team structures, roles and responsibilities within the organisation. A better understanding of the dynamics of the strategy artefacts facilitated the implementation of that change considerably. This was a key learning exercise that brought considerable improvement, but the same time highlighted the need to better understand the nature of storytelling and narrative in strategy.

Case Study 3: Introduction of a Balanced Scorecard

Many people think of measurement as a tool to control behaviour and to evaluate past performance. The measures on a Balanced Scorecard, however, should be used as the cornerstone of a management system that communicates strategy, aligns individuals and teams to the strategy, establishes long-term strategic targets, aligns initiatives, allocates long- and short-term resources, and, finally, provides feedback and learning about the strategy (Kaplan and Norton 1996) . The introduction of a balanced scorecard at Ordnance Survey facilitated the strategy review that was essential in strategic learning. Traditionally, companies use the monthly

or quarterly meetings between corporate and division executives to analyse the most recent period's financial results. Discussions focus on past performance and on explanations of why financial objectives were not achieved. The balanced scorecard, with its specifications of casual relationships between performance drivers and objectives allows corporate and business unit executives to use their periodic review sessions to evaluate the validity of the unit's strategy and the quality of its execution (Kaplan and Norton 2007).

In 2005, a balanced scorecard was introduced to help evaluate and control the sales and marketing strategy at Ordnance Survey in Southampton. Prior to 2005 the conversation of the senior management team in the sales and marketing division was very much driven by the need to achieve challenging sales targets, with a budget that was coming under increasing scrutiny. As a public sector organisation, Ordnance Survey had a broad range of markets that had to be served. The business model of the organisation was built upon a licensing model where customers gain access to geographic information through a wide variety of licensing mechanisms. These mechanisms were growing in complexity as Ordnance Survey opened new channels to new markets with a growing product portfolio. This growing complexity began to highlight weaknesses in the senior management team's ability to control and direct the senior management conversation with the rest of the business and key stakeholder and customer groupings. It was for this very reason that it was agreed by the senior management team a balanced scorecard would offer real potential to regain control of the conversation.

What is a Balanced Scorecard

A balanced scorecard is a means by which strategy stakeholders may engage with the strategy and perhaps seek to agreeing the strategy discourse (Chesley 1999). Its collects signs through discourse that are believed to represent the past, present and future. It's origination within an organisation is usually as a means of dealing with ambiguity and doubt regarding the currency and interpretation of performance of the strategy. This doubting had a wide canvas at Ordnance Survey where some stakeholders may interpret strategy artefacts to subvert key strands of strategy that were used to set objectives that may comprise the position that they occupy within

the strategy (Ezzamel and Willmott 2008). While others may exploit ambiguity inherent in current strategy discourse to produce interpretations that allow them to pursue personal objectives that seek to preserve and protect self-interest (McCabe 2010). In extremis those engaged in strategy discourse may seek to consolidate their positions to protect the integrity of their own domains (Laine and Vaara 2007); or indeed seek to establish partnership alliances with other individuals and/or collectives whose motivations for resistance do not necessarily proceed from threatened interests or identities.

Hitherto the introduction of a balanced scorecard at Ordnance Survey the then existing conversation in the sales and marketing team was viewed from an almost totally external perspective. The key drivers for this were set in the performance targets that were focussed on sales, revenue and the development of a partner channel to open new markets. The barriers to achieving these targets were considerable and the team conversation was consumed by discussion on closing the gap between budget targets and actual performance, from an external perspective, without any diagnosis of the of the reasons why this gap existed from an internal staff and process perspective. This project set out to change the conversation with a completely new narrative. There was a newfound recognition within the team that the root cause of the performance gap lay within the organisation and a consensus was gained on the introduction of a balanced scorecard. This identified artefacts that were relevant to managing performance within the business that would help to achieve performance target. Learning from case studies one and two above the strategy and business planners engaged the team in identifying the artefacts and agreeing key performance indicators. This process helped the sales and marketing senior management team to invest a sense of ownership in the new balanced scorecard and consequently led to a new conversation that created a more holistic view of performance in the customer interface. While the new conversation led to greater accountability it helped to create a more cohesive team that grew in confidence as the strategy discourse was wholly focussed on the artefacts within the balanced scorecard.

There is a growing body of research building on the field of strategy discourse that makes a considerable contribution to the wider field of research into strategy as practice (SAP) drawing attention to the need for further specific research in the construct of strategy discourse (Ezzamel and Willmott, 2008); particularly so where actors may be resisting the discourse that fails to coerce them towards are more univocal construct towards strategy (Ezzamel and Willmott 2008; McCabe 2010; Hardy and Thomas 2014) cited in (Dick and Collings 2014).

Deconstruction emphasises the limits of language alone as a vehicle of change in strategy conversation and also emphasises that there is no clear parameter between storytelling and narrative. The deconstruction of strategy conversation opened the door to the plurivocal (the partial, singular and parochial); and the mutes (those actors in strategy conversation previously disinterested). These actors were given the opportunity to create their own semiotics and signs derived from signs to define objectives, which became signs in themselves to the wider management group and the community as a whole.

Resource Based View

The adoption of a balanced scorecard necessitates a resource-based view of the organisation (Gomes and Romão 2014). This resource-based view puts into sharp relief the artefacts that need to be developed as key performance indicators and therefore set the discourse agenda in a senior management team who are responsible for the delivery of strategy objectives. Above observations on the balanced scorecard have led to significant scientific inquiries into the two management theories – resource-based view (RBV) and resource dependence theory (RDT). The first one is orientated at resources owned by the organisation (staff, processes, IT systems and intellectual capital), the second one is orientated at the resources obtained from the environment within which it operates (in the form of sales, revenue, customers and partners). The objective of this project was the identification of which orientation, RBV or RDT, dominated in decision making process in Ordnance Survey (Fraczkiewicz-Wronka and Szymaniec 2012). RBV is characterised by the idea that capital, labour and natural resources are the factors influencing the economic growth of an organisation.

Turning to resource-based theory, (Bonn and Pettigrew 2009) propose a research agenda that can assist in developing dynamic and comprehensive senior management theory; based upon the concept of temporality; the life cycle metaphor; decision making theory; and resource dependency theory. In particular, they assert that researchers need to examine the activities and choices made by senior management team members. Braganza, Hackney and Tanudjojo (2007) state that there is a paucity of theory for effective management of knowledge transfer within large organisations as current research methodology attempting to answer questions such as, what attributes lead to effective knowledge creation, mobilisation and diffusion; is mechanistic and does not define human behaviour and motives that may contribute to knowledge transfer.

Grinyer, Al-Bazzaz and Yasai-Ardekani (1986) studied the corporate planning process across 48 UK companies and described how focus and vested interests may introduce bias to the corporate planning process, without describing what the motivating factors of the individuals were. (Tarter and Hoy 1998), looked at decision making within organisations, and determined that an individual's decision is rational if it is consistent with the values, alternatives, and information that were analysed in reaching it. They then went on to discuss the politicised organisation where individuals may use satisfying approaches to develop strategies where ultimately the game is power, that is, gaining as much influence and as many resources as possible. When politics dominate organisational decision making, then personal goals displace organisational ones. Husted (2000) discussed types of social issues such as disagreements, gaps in expectations between individuals the firm and its stakeholders. He acknowledges that gaps between reality and expectations give rise to conflict but does not describe the dynamics that may give rise to this conflict. In organisational adaptation, Miles and Snow (1992) discuss the need for organisational agility to adjust to environmental shifts, either within the constraints of the operating logic of the organisation; or by adopting a new form to fit a new strategy. They go on to acknowledge that in terms of internal communications, every interaction is coloured by the hidden threat of hierarchical politics and that power and influence rather than performance is guiding behaviour. There is tendency for management to maintain the organisation's current strategy and structure

in the face of overwhelming changes in the environment. Conversely, the accumulation of more know-how than their present operating logic allows them to utilise, creates excess capacity that may push managers to experiment outside of their current roles and responsibilities, which can create tension within the organisation such as:

VII. Coping strategies and how the discourse develops in order to articulate the individuals' contribution in the new organisational reality.
VIII. The nature of change adopted by the individual may depend on their behavioural characteristics at that time.
IX. And politics through strategy discourse as players cope with uncertainty in an attempt to adapt to the new reality

This project helped the senior management team to invest a sense of ownership in the new balanced scorecard and consequently led to a new conversation that created a more holistic view of performance. Originally framed as a knowledge management project this led to a new conversation through storytelling and narrative and led to greater accountability. It also helped to create a more cohesive team that grew in confidence as the strategy discourse more wholly focussed on the artefacts within the balanced scorecard, as a vehicle for a more fluid form of knowledge transfer.

Annex 2: Variables (Strategy Artefacts)

For the purposes of replication this technical appendix includes a more precise definition and rationale for each of the 47 Q Sort Statements that form the Q Sort Concourse; and in turn, used as variables (artefacts) to answer the Q Sort Condition of Instruction used in Data Collection Part One (please refer to section 5.5.6 on page 123 above in Chapter Five at. This annex also provides the reader with a central repository of citations reference literature underlying this research project. Representamen Firstness

A concept independent of anything else. A Sign. Corresponds to emotional experience. In the context of generality. A 'sensation' without knowing where it comes from, perhaps sometimes misinterpreted as a 'sixth sense'.

Representamen Firstness

ID	Q Card Statement	Rationale	Trichotomies	Trichotomy Definition	Reference
1	I feel a strong sense of participation in this strategy.	Test for coadunation.	Qualsign	A quality that functions like a sign but cannot act like a sign until it is embodied.	(Mantere and Vaara 2008)
2	I am very aware of the key components and objectives of the strategy.	Test the awareness of the scope of strategy.	Qualsign	A quality that functions like a sign but cannot act like a sign until it is embodied.	(Sloan 2017)
3	I fully understand the key components of strategy.	Immediate recognition of artefacts.	Legisign	Sinsigns that are rendered by a law that makes it conventional.	(Sloan 2017; Collinge and Harty 2014)
4	The strategy is based upon sound analysis of the need for change.	Level of ambiguity held.	Legisign	Sinsigns that are rendered by a law that makes it conventional.	(McCabe 2010; Johnson, Scholes and Whittington 2008)
5	I am confident in my interpretation of the need for change.	Partiality.	Sinsign	Are qualsigns that are embodied in a spacio-temporal sense that forms a sign.	(Dick and Collings 2014)
6	The narrative that describes the need for change is very interesting.	Curiosity in definition of the artefacts.	Sinsign	Are qualsigns that are embodied in a spacio-temporal sense that forms a sign.	(Dick and Collings 2014)
7	Outcome statements are very relevant to the strategy.	Relevance of artefacts to strategy.	Sinsign	Are qualsigns that are embodied in a spacio-temporal sense that forms a sign.	(Balogun *et al.* 2014)
8	I strongly identify with the need for change.	Connectivity with artefacts.	Qualsign	A quality that functions like a sign but cannot act like a sign until it is embodied.	(Mantere and Vaara 2008)
9	There is a strong consensus on the assumptions that this strategy is based upon.	Level of resonance with artefacts.	Sinsign	Are qualsigns that are embodied in a spacio-temporal sense that forms a sign.	(Morin and Gold 2009)
10	I was very involved in the development of this strategy.	Proximity and relevance of artefacts.	Qualsign	A quality that functions like a sign but cannot act like a sign until it is embodied.	(Skogland 2017; Balogun *et al.* 2014)
11	The reasons for this strategy is hard to recognise.	Level of reasoning.	Sinsign	Are qualsigns that are embodied in a spacio-temporal sense that forms a sign.	(Jarzabkowski 2004)

ID	Q Card Statement	Rationale	Trichotomies	Trichotomy Definition	Reference
12	This strategy is not relevant to me.	Agnosticism.	Qualsign	A quality that functions like a sign but cannot act like a sign until it is embodied.	(Chandler 2007; Johnson, Scholes and Whittington 2008)

Object Secondness

A concept that is relative to something else, may include experience, existence, action, reaction. Corresponds to practical experience. Where the past enters the present. In the context of individuality.

ID	Q Card Statement	Rationale	Trichotomies	Trichotomy Definition	Reference
13	I agree with my peers on the current situation.	Community accord, congruence.	Indexical	A dynamic spatial connection between two actualities.	(Jarzabkowski 2004; Collinge and Harty 2014)
14	The quality of evidence upon which the strategy is based is very strong.	Concurrence with existing knowledge.	Iconic	Interpretations of firstness that is dyadic in nature.	(Mantere and Vaara 2008; Chandler 2007; Johnson, Scholes and Whittington 2008; Polonsky and Scott 2005)
15	The need for change is easily challenged.	Test for equivocation.	Symbolic	A sign that is created by an object that is assigned to it by a rule of interpretation.	(McCabe 2010; Petrilli 2015)
16	Aims and objectives are based upon strong evidence.	Relatedness to aims and objectives.	Indexical	A dynamic spatial connection between two actualities.	(Balogun *et al.* 2014)
17	There is a broad consensus of agreement for the strategy.	Simpatico.	Iconic	Interpretations of firstness that is dyadic in nature.	(Smelser and Swedberg 2005; Brown 1980)
18	My contribution to the strategy is valued by my peers.	Perceived level of contribution.	Iconic	Interpretations of firstness that is dyadic in nature.	(Collinge and Harty 2014)
19	The strategy is a clear and unambiguous statement of intent.	Interpretation of artefacts.	Iconic	Interpretations of firstness that is dyadic in nature.	(McCabe 2010; Jarzabkowski 2004; Collinge and Harty 2014)
20	The community understands the reasons for the need for change.	Level of partisanship towards artefacts.	Iconic	Interpretations of firstness that is dyadic in nature.	(Collinge and Harty 2014)
21	I am free to interpret the strategy as I see it.	Degree of self-determination from artefacts.	Symbolic	A sign that is created by an object that is assigned to it by a rule of interpretation.	(McCabe 2010; Brown 1980)
22	Community interpretation of the strategy is strong.	Level of discrimination.	Indexical	A dynamic spatial connection between two actualities.	(Walley 2013; Sloan 2017)
23	I agree with my peer's interpretation of this strategy.	Degree of connectedness with the strategy.	Indexical	A dynamic spatial connection between two actualities.	(Sloan 2017; McElroy 2003)
24	Do you feel threatened by the objectives of this strategy.	Existence of fear.	Symbolic	A sign that is created by an object that is assigned to it by a rule of interpretation.	(Bonn and Pettigrew 2009; McCabe 2010; Sloan 2017)

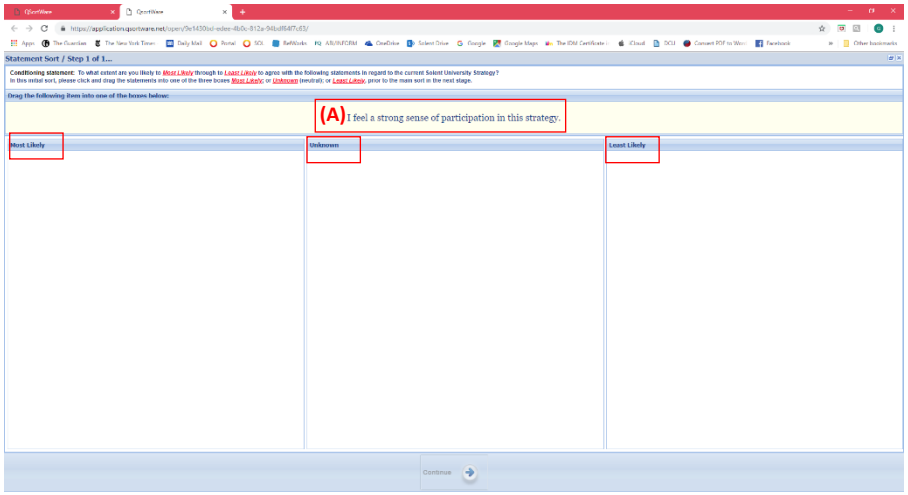
Interpretant Thirdness

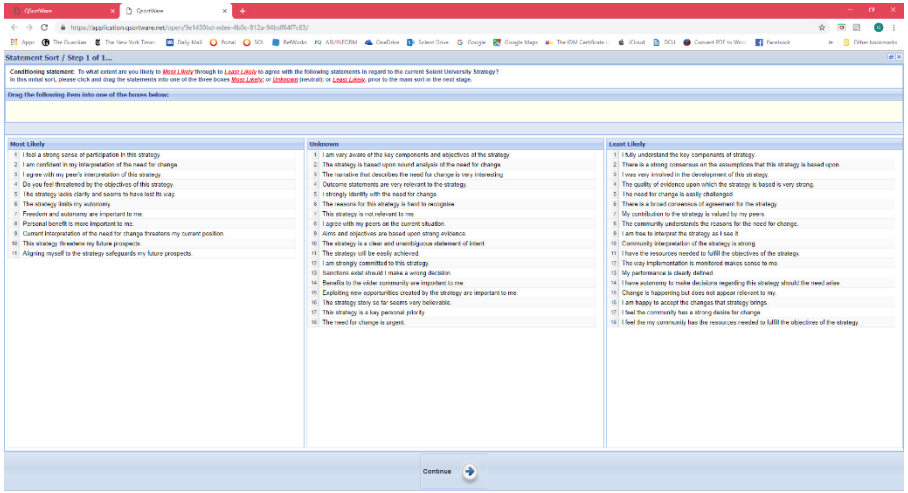
The mediator through which the first and the second are brought into relation. The application of knowledge, corresponding to intellectual experience and the application of rules, laws, and grammar.

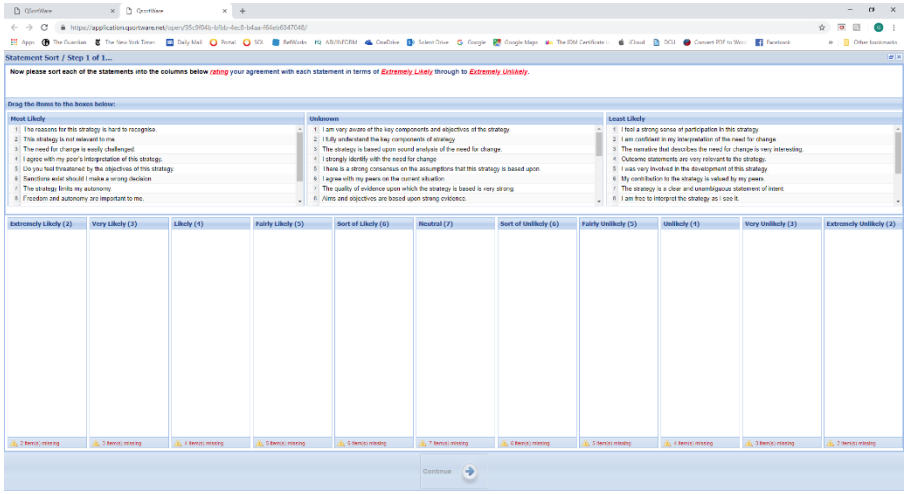
ID	Q Card Statement	Rationale	Trichotomies	Trichotomy Definition	Reference
25	The strategy will be easily achieved.	Ability to grow and form.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Walley 2013; Sloan 2017)
26	I have the resources needed to fulfil the objectives of the strategy.	Level of belief.	Rheme	Can either be an icon, index or symbol bringing something to one's attention.	(Johnson, Scholes and Whittington 2008; McCabe 2010)
27	The way implementation is monitored makes sense to me.	Level of coordination and solidarity.	Dicisign	Indexical in nature related to the object it portrays.	(Smelser and Swedberg 2005; Bonn and Pettigrew 2009; Covington 2012)
28	My performance is clearly defined.	Transparency of the construct.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Fairclough 2003; Johnson, Scholes and Whittington 2008; McCabe 2010)
29	I am strongly committed to this strategy.	Allegiance to the construct.	Dicisign	Indexical in nature related to the object it portrays.	(Inkpen 2000; Beer and Nohria 2009; Basu, Pradhan and Tewari 2017)
30	The strategy lacks clarity and seems to have lost its way.	Level of obligation.	Dicisign	Indexical in nature related to the object it portrays.	(Brown 1980; Watts 1996; Mantere and Vaara 2008)
31	I have autonomy to make decisions regarding this strategy should the need arise.	Latitude for discretion.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Brown 1980; Mintzberg, Ahlstrand and Lampel 1998; Mantere and Vaara 2008)
32	Sanctions exist should I make a wrong decision.	Test for commination.	Dicisign	Indexical in nature related to the object it portrays.	(Mintzberg, Ahlstrand and Lampel 1998)
33	The strategy limits my autonomy.	Durability of jurisdiction.	Rheme	Can either be an icon, index or symbol bringing something to one's attention.	(Bonn and Pettigrew 2009; McCabe 2010; Sillince, Jarzabkowski and Shaw 2012)
34	Freedom and autonomy are important to me.	Test for self-determination.	Dicisign	Indexical in nature related to the object it portrays.	(Gagne 2009; Sillince, Jarzabkowski and Shaw 2012)
35	Benefits to the wider community are important to me.	Test for citizenship.	Dicisign	Indexical in nature related to the object it portrays.	(Gagné and Deci 2005; Basu, Pradhan and Tewari 2017)
36	Personal benefit is more important to me.	Test for synchronicity.	Dicisign	Indexical in nature related to the object it portrays.	(Mantere and Vaara 2008)
37	Exploiting new opportunities created by the strategy are important to me.	Perceived personal value obtained.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Basu, Pradhan and Tewari 2017)
38	Current interpretation of the need for change threatens my current position.	Artefacts are perceived as threatening.	Dicisign	Indexical in nature related to the object it portrays.	(Bonn and Pettigrew 2009; McCabe 2010)
39	This strategy threatens my future prospects.	Empathy towards the construct.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Bonn and Pettigrew 2009; McCabe 2010)
40	Change is happening but does not appear relevant to me.	Test for relevance of strategy.	Dicisign	Indexical in nature related to the object it portrays.	(Balogun *et al.* 2014)
41	Aligning myself to the strategy safeguards my future prospects.	Utility of artefacts in strategy.	Rheme	Can either be an icon, index or symbol bringing something to one's attention.	(Polonsky and Scott 2005; Collinge and Harty 2014)
42	The strategy story so far seems very believable.	How well is strategy communicated.	Dicisign	Indexical in nature related to the object it portrays.	(Watts 1996; Robichaud, Giroux and Taylor 2004)
43	This strategy is a key personal priority.	Test for vicissitude.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the	(Chandler 2007; Jarzabkowski 2004)

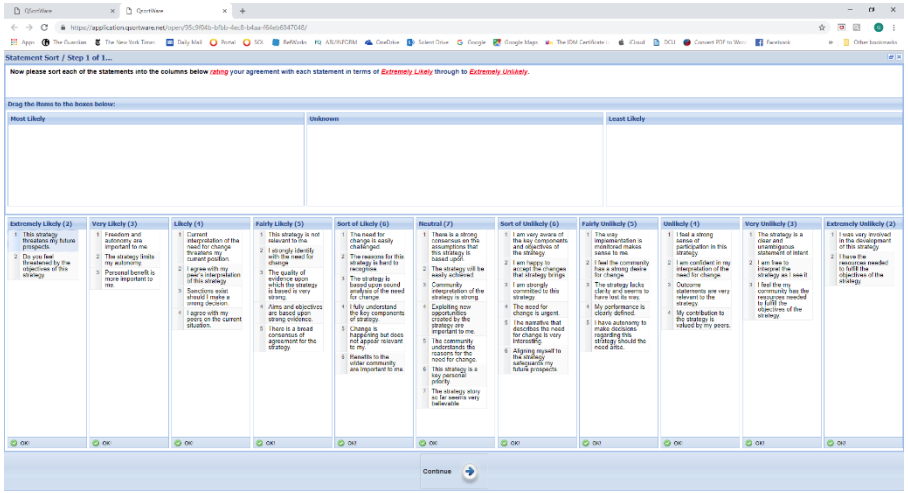
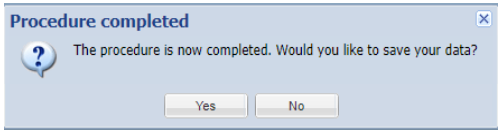
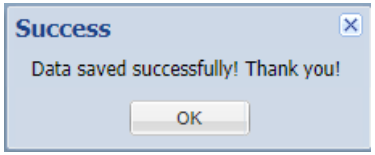
ID	Q Card Statement	Rationale	Trichotomies	Trichotomy Definition	Reference
				Representamen to the Object.	
44	The need for change is urgent.	Test for resistance to change.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(van Dijk 1997; Henderson and Wink 2018)
45	I am happy to accept the changes that strategy brings.	Test for ease of personal change.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Chandler 2007; Bergman 2009)
46	I feel the community has a strong desire for change.	Test for ease of community change.	Argument	The act of reasoning through the interpretation of syntax that seeks to join the Representamen to the Object.	(Chandler 2007; Bergman 2009)
47	I feel that my community has the resources needed to fulfil the objectives of the strategy.	Community capability.	Rheme	Can either be an icon, index or symbol bringing something to one's attention.	(Jarzabkowski 2004; Polonsky and Scott 2005)
48	I am a key influential stakeholder in this strategy.	Level of perceived influence.	Dicisign	Indexical in nature related to the object it portrays.	(Walley 2013; Collinge and Harty 2014)

Annex 3: Q Sort – Respondent guidance Notes

Stage	Instruction	Guidance
1.	Respondent clicks <Statement Sort> button.	
2.	In this initial sort drag and drop items at (A) into boxes: • ***Most Likely*** • ***Unknown*** • ***Least Likely*** to rate your agreement with each statement.	

Stage	Instruction	Guidance
3.	When this initial sort is complete click the <Continue> button at the bottom of the screen.	

Stage	Instruction	Guidance
4	This screen will now open. Please click and drag each of the statements into the columns below, rating your agreement with each statement in terms of: • ***Extremely Likely*** through to • ***Extremely Unlikely*** The numbers in brackets at the top of each column determine the number of statements you are limited to placing in each column.	

Stage	Instruction	Guidance
5	Please make sure that "OK" appears at the base of each column. Then click on <Continue>	
6	Click the <Yes> button to complete the procedure.	
7	Click the <OK> button to exit.	

Annex 4: Cognitive Components in Discourse Analysis

Van Dijk summarises some structures and strategies that are specifically affected by the management of knowledge, and which hence may be specifically focused on in critical studies (van Dijk 2008):

I. **Topics**
   Selected information of discourse, discourse topics (or themes) aligned tolocal meanings and coherence in such a way that is best recalled by the recipients organising their mental models and the formation of general knowledge.
II. **Local coherence**
   Crucial in the formation of (preferred) mental models of causal structures and constructs providing insight into the way's authors manage the explanation of events.
III. **Actor description**
   Discourse and knowledge transfer is usually about people, and is therefore crucial how people are being described. This is the preferred habit of the ideological polarisation between in-group (Us) and out-group (Them), as well as the analysis of stereotypes, bias and prejudices.
IV. **Levels, details and precision of description**.
   Descriptions of actors and their actions, as well as of political and social events, may vary in many semantic ways. Particularly the level of detail (granularity) with which knowledge is communicated in the context of precision or vagueness of the descriptions.
V. **Implications and presuppositions**
   Shared knowledge is usually presupposed in discourse and may not be asserted or even expressed but left in an implied state. This means that knowledge may be obliquely asserted ("accommodated") as if generally known and shared. Implications of knowledge inconsistent with dominant interests may be left implicit in official discourse.
VI. **Evidential**
   Discourse that is credible when based upon attributed evidence either people or recorded. Knowledge transfer is more trusted when attributed to empirical evidence, although that doesn't mean a truth claim. Evidence may be trusted, but it does not mean it is truth.
VII. **Argumentation**
   The exchange of beliefs in knowledge applied to discourse structures organised to defend points of view involve opinions and partisan representations of reality.
VIII. **Metaphor**
   Metaphors represent or embody, experiential conceptualisation of abstract and complex knowledge of the world, and the choice of such metaphors is therefore crucial for our understanding of social and political events.

IX. **Modalities**

Events and knowledge may be presented as modalised as certain, necessary, probable or possible; depending again on the interests of the authors. Knowledge grading is an essential strategy in the management of knowledge.

X. **Rhetorical devices**

Rhetorical devices, such as hyperbole and euphemisms, emphasise or de-emphasise knowledge structures in discourse.

XI. **Grammar**

Syntax expresses or signals what knowledge is asserted, presupposed, recalled or how such knowledge is distributed as well as intonation, stress, volume.

XII. **Lexicon**

The inventory of base morphemes plus their combinations with derivational morphemes. The selection may contextually depend on setting, participants and goals, but also on the knowledge and ideologies of the dominant authors and their groups.

XIII. **Nonverbal ('semiotic') structures**

Knowledge may be formulated in verbal discourse, but also in many nonverbal sign systems in different semiotic modes. Semiotic analysis of these nonverbal modes may especially examine how such non-verbal modes of expressions complement, emphasize, contradict or detail verbal expressions of knowledge.

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